Culture of Female Leadership in a Business Case for Gender Diversity

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

Globally, just under half of the workforce is currently comprised of women, and yet, upper management and executive positions in the corporate world continue to be dominated by men (Terjesen & Sealy, 2016). For example, women hold one-fifth of seats on the boards of directors (BODs) and constitute a quarter of managerial personnel in S&P 500 companies. Research on Australian, Norwegian, and European Union enterprises reports even fewer per cent of women holding CEO (3.3-5%) and chair of a board (3-7%) positions in the span of the past 15 years. A similar picture is observed worldwide.

Initiated as a way to end the problem of underrepresentation of women in corporate leadership by proving economic benefit of their human capital, the *business case* research fails to produce conclusive results. Hoobler et al. (2018) and Mensi-Klarbach (2014) identify a possible root cause of the ambiguity – an absence of a multilevel framework enabling a non-essentialist method for gender effect examination. Thus, this research draws attention to the expectations states theory (EST) and work conducted by Lucas (2006) that bridges the EST and neoinsitutional theory. It suggests that this theoretical program, through a lens of status-based group interactions, provides a holistic view of the role gender plays in leadership team performance. Consequently, it enables a research of gender diversity impact on corporate governance from a non-essentialist point of view and, consequently, it has an advantage over alternative conceptual frameworks applied in business case research.

Thus, the purpose of this research was to 1) design a status proxy and 2) run a macro study answering whether status concept has a greater capacity to explain gender effect on

corporate governance. Particularly, the work examines gender-based status interference with information exchange, healthy competitive environment and power dynamics in comparison with upper echelons, critical mass, and social identity theories' concepts of *cognitive maps*, women numerical representation, and identity-based group splits respectively.

Thus, this research designs a status proxy, *gender-neutral leadership index* (GNL), based on Lucas' (2006) work. Then, it overviews the critical mass (CMT), upper-echelon (UET), social identity (SIT), and associated with SIT categorization-elaboration model (CEM) and faultlines theories (FT). The study specifically focuses their propositions of gender influence on information exchange and processing, power distribution, and conflicts in leadership teams. It also highlights the CMT, UET, and SIT's theoretical limitations to conduct a business case from non-essentialist perspective. Further, this research hypothesizes how the GNL explains gender agency in boards of directors relations via the aforementioned principles and designs a study examining the explanatory power of the EST.

The results support a relation between the esteem of female leaders and firm performance, implying that cognitive capacities of a team improve as a gap between men and women's statuses diminishes. The data analysis also indicates that the informal status of women leaders influences power distribution among team members and the degree of team cohesion, unlike the critical mass and faultlines strength concepts. Overall, this study provides evidence in favour of status equality to facilitate a company's success. Thus, new policies should be developed with consideration of female leadership norms, whereby the GNL index can be applied as a reference.

Future research can improve the GNL index accuracy as this measurement was first introduced in this work. For instance, this study designed the index assuming equal strength of the relation between the GNL and its constituencies. Thus, the tool would benefit from qualitative research by conducting an in-depth examination of social institutes and their weight in shaping the culture of gender-neutral leadership. Future research could also address the limitations of this study.

Keywords: culture, expectations states, female leadership, firm performance, legitimacy, status characteristics, power, conflict

Acknowledgement

This work was inspired by women leaders who break gender stereotypes and personify the principles of diversity. The very first is my mother, the one and only head of our family, an excellent specialist and manager. Second is a powerhouse of women: Mses. Kalelova, Ayangaliyeva, Omarova, Hamilton, North, Wessel, Meier, Miller, and Backer. Under their superior leadership, I developed as a professional. For all of them, I am thankful.

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Dedication

To future; to my niece and all young she-leaders of the world.

To past; to Mukhametkhan, Erbol, Zulfiya and Zhenis. Rest in peace.

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List of Abbreviations

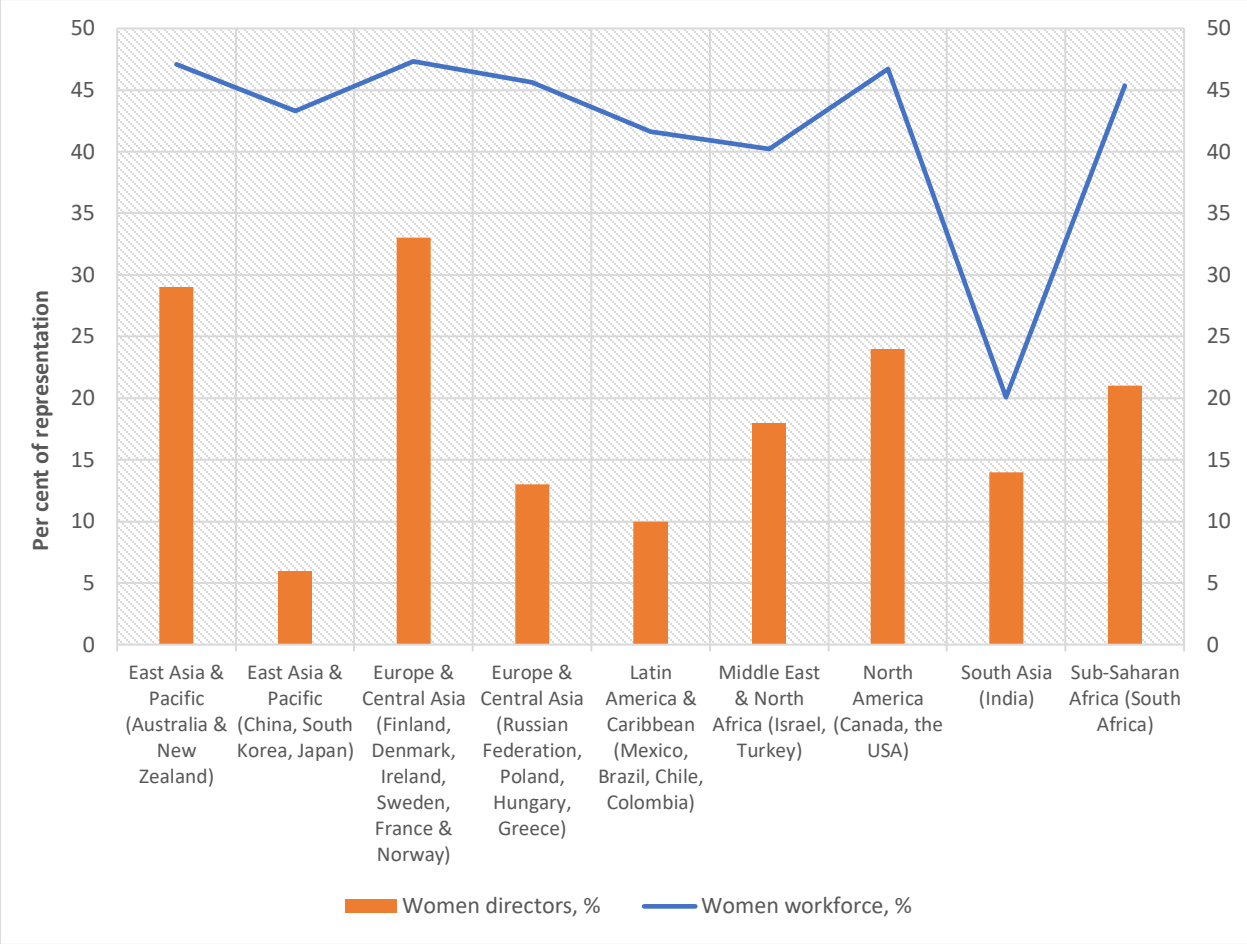
BOD	board of directors
CEM	categorization-elaboration theory
CEO	chief executive officer
CMT	critical mass theory
CRM	critical mass of women directors
CSR	corporate social responsibility
Dg	faultlines distance
EST	expectations states theory
FAU	faultlines strength
FAU_S	strong faultlines strength
FAU_W	weak faultlines strength
FL	social belief and norm of female leadership
FT	faultlines theory
GNL	social belief and norm of gender-neutral leadership
GNL_H	high gender-neutral leadership
GNL_L	low gender-neutral leadership
IT	informational technologies
non-STEM	non science, technology, engineering and math field
NWBOD	board with no women directors

OLS	ordinary least squares regression
ROA	return on assets
S&P 500	Standard and Poor index of the US 500 largest listed companies
SIC	Standard industrial code
SIT	social identity theory
The GGGR	the Global Gender Gap Report
TILTED	board with tilted number of women
UET	upper echelons theory
WBOD	board with women directors

Introduction

Observed in twentieth-century environmental, economic, and social processes and events revealed the unsustainability of the existing state of affairs (Broman et al., 2017; Daly & Farley, 2011; Kates, Parris, & Leiserowitz, 2005; Weber & Feltmate, 2018). Defining fundamental problems, the United Nations organization distinguishes gender inequality as one of them (United Nations, 2015) and urges society to provide equal involvement in and influence on decision-making for women and men (M. del C. Triana, Jayasinghe, Pieper, Delgado, & Li, 2019; United Nations, 2015, 2018). In this regard, business entities show improvements, yet, the progress is slow (R. Hausmann, L. Tyson, 2010; Terjesen & Sealy, 2016; World Economic Forum, 2019). As an example, women influx to the US labour marker has rapidly transformed its demographic composition (Gipson, Pfaff, Mendelsohn, Catenacci, & Burke, 2017; Lucas & Baxter, 2012). Today about 50% of the workforce is comprised of women (The World Bank, 2020). Nonetheless, the upper echelons of the corporate world are dominated by men (Gipson et al., 2017; Terjesen & Sealy, 2016). For example, women hold a one-fifth of seats in the boards of directors and constitute a quarter of managerial personnel in S&P 500 companies (Catalyst, 2020). Furthermore, research on Australian, Norwegian, and European Union enterprises reports a lower percentage of women holding CEO (3.3-5%) and chair of a board (3-7%) positions in the span of past 15 years (Nekhili, Chakroun, & Chtioui, 2018). In fact, a similar picture is observed worldwide and Figure 1 visually demonstrates this trend (Gipson et al., 2017; R. Hausmann, L. Tyson, 2010; The World Bank, 2020; World Economic Forum, 2017, 2019).

Figure 1. Regional trends of women workforce participation and directorship

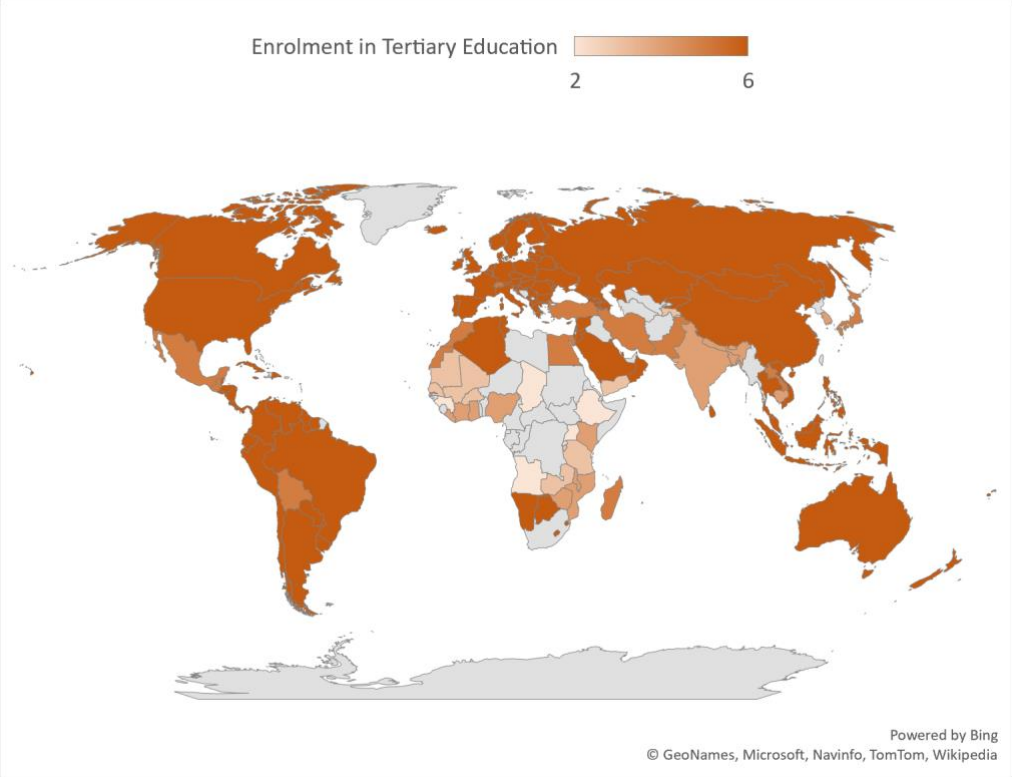


Sources: The World Bank, 2020; World Economic Forum, 2019

Previously, the underrepresentation was assumed to be an outcome of women's insufficient human capital (Dreher, 2003). However, facts indicate otherwise, finding men rather than women to have less advanced academic degrees (Figure 2) and acquire experience within same or in similar professional settings (Conyon & He, 2017; Seierstad, Warner-Søderholm, Torchia, & Huse, 2017). Therefore, some other factors may create obstacles for female leadership. Scholars suggest gender bias and the underestimation of women professionalism influence women's chances of becoming leaders (Eagly & Karau,

2002; Gipson et al., 2017; Hoobler, Masterson, Nkomo, & Michel, 2018). Indeed, presuming that salary is an indicator of esteem, the fact that outperforming men they still receive lower compensation supports this idea (Figure 3) (Ostroff & Atwater, 2003). Moreover, compensation gap widens with women's movement up the organizational hierarchy (Ostroff & Atwater, 2003), implying that discrepancy in esteem between them and peers of opposite sex increases with the professional growth of women.

Figure 2. Global gender parity in the acquisition of post-graduate education in 2014 (x20%)



Source: World Economic Forum, 2014

The role congruity theory argues that women's capabilities and contributions are discounted due to their failure to comply with gender stereotypes (Eagly & Karau, 2002). Furthermore, when women ascend a career ladder, they eventually have to demonstrate

their fitness to leadership stereotype (Cook & Glass, 2018). Owing to the fact that leadership is associated with masculine characteristics (Brody, Rubin, & Maume, 2014; Eagly & Karau, 2002; Foschi, 2000; Gupta, Han, Mortal, Silveri, & Turban, 2017; M. E. Heilman, 2001; Madeline E. Heilman, Wallen, Fuchs, & Tamkins, 2004; Koenig, Eagly, Mitchell, & Ristikari, 2011; Ostroff & Atwater, 2003; Prime, Carter, & Welbourne, 2009; Valls Martínez & Cruz Rambaud, 2019), women find themselves constrained by a *double bind* (Gipson et al., 2017; Kubu, 2018) or *double standards* (Foschi, 1996, 2000), meaning that they are expected to comply with both gender and leadership roles (Foschi, 1996; Kubu, 2018; Mize, 2019). Since these roles are mutually exclusive, either agentic or communal behaviour entails penalties due to *role incongruity* (Eagly & Karau, 2002). For instance, women who show cues of dominance are resisted by subordinates (Wang, Markóczy, Sun, & Peng, 2019) and likely to be deprived of a promotion (Fiske, 2018). Being in a position of power, they are subjected to a stricter evaluation of performance than men. Consequently, social pressures amplify with the professional success of women (Madeline E. Heilman et al., 2004).

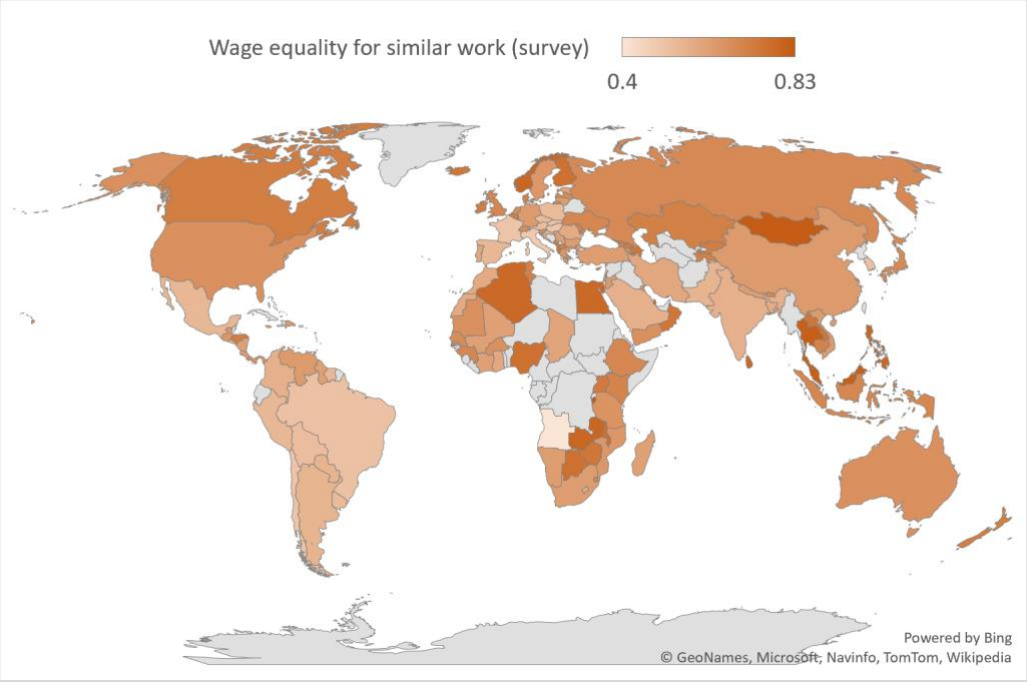
Thus, governments, civil leaders, and scholars resorted to a business case research to dispel the prejudice and prove women contributions to corporate governance (Hoobler et al., 2018; Post & Byron, 2015; M. del C. Triana, Jayasinghe, et al., 2019). The studies that establish a relation between women leaders' representation and enterprise success are centred around three popular frameworks: the agency, resource dependence and stakeholder theories (Marinova, Plantenga, & Remery, 2016; Valls Martínez & Cruz Rambaud, 2019). The agency theory contemplates about contingencies, associated with leadership teams breaching liabilities to shareholders and abusing entrusted decision-making rights in pursuit

of personal agenda (Jensen & Meckling, 1976; Terjesen, Sealy, & Singh, 2009). Consequently, this theory stresses on the quality of monitoring fulfilled by the board of directors (Cabeza-García, Fernández-Gago, & Nieto, 2018; Carter, Simkins, & Simpson, 2003; Terjesen et al., 2009). The case for gender diversity is built upon the fact that diversity ensures directors' independence, which is thought to supervise corporate governance and protect shareholders' interests (Valls Martínez & Cruz Rambaud, 2019). The resource dependence theory, on the other hand, considers directors' backgrounds and skillsets as an asset (Valls Martínez & Cruz Rambaud, 2019). In this light, diversity becomes a competitive advantage, especially in times of uncertainty, when companies capitalize on resourcefulness, creativity and problem-solving abilities of its leadership teams (Carter et al., 2003; Terjesen et al., 2009). The stakeholder theory looks at the problem from the internal and external players perspective (employees, supply chain) and emphasizes the advantage of diversity in firm value creation (Valls Martínez & Cruz Rambaud, 2019).

However, despite popularity, these frameworks fail to pass an empirical test (Conyon & He, 2017; Cook & Glass, 2018; Dale-Olsen, Schøne, & Verner, 2012; Joecks, Pull, & Vetter, 2013; Wiley & Monllor-Tormos, 2018). Persisting mixed results suggest the presence of extraneous variables and prompt their further exploration (Guillaume, Dawson, Otaye-Ebede, Woods, & West, 2017; Hoobler et al., 2018; Mensi-Klarbach, 2014; Roh & Kim, 2016). Commenced research identifies a wide array of potential factors, influencing BODs and firm performance. Some factors are industry sectors and business models (Baker, Ali, & French, 2019; Bass, 2019; Schwab, Werbel, Hofmann, & Henriques, 2016; Wiley & Monllor-Tormos, 2018), forms of incorporation (Chadwick & Dawson, 2018; Valls Martínez & Cruz Rambaud,

2019), and types of ownership (Amore, Garofalo, & Minichilli, 2014; Chadwick & Dawson, 2018). Scholars also explore country-specific contexts (Adams & Ferreira, 2009; Amore et al., 2014; Cabeza-García et al., 2018; Conyon & He, 2017; Cook & Glass, 2018; Galbreath, 2018; Jia & Zhang, 2013; Liu, Horng, Chou, Huang, & Chang, 2018; Schwab et al., 2016; Valls Martínez & Cruz Rambaud, 2019; Wahid, 2019; Wiley & Monllor-Tormos, 2018) and cross-country differences (Dale-Olsen et al., 2012; Marinova et al., 2016; Ritter-Hayashi, Vermeulen, & Knoben, 2019). Instead, others focus on micro-level variables. For instance, Jia & Zhang (2013) consider a mediating effect of age. They imply that this demographic characteristic, in a context of Chinese culture, may improve cohesion between board members. Therefore, male BODs are more likely to support social programs initiated by women directors.

Figure 3. Global map of wage equality in 2014



Source: World Economic Forum, 2014

Despite all efforts, the scientific community still unable to give a conclusive answer about a cost-benefit of gender diversity (Hoobler et al., 2018; Post & Byron, 2015; Terjesen & Sealy, 2016). Hoobler et al. (2018) and Mensi-Klarbach (2014) argue that this persisting problem is a result of theoretical limitations and methodological approaches for examination of gender effect on governance. Their studies note that the effect of female leadership predominantly is examined from an essentialist perspective (Hoobler et al., 2018; Mensi-Klarbach, 2014). This worldview clearly outlines women and men's differences in innate or socially constructed abilities and traits (Mensi-Klarbach, 2014), ignoring their similarities (Gipson et al., 2017; Seo, Huang, & Han, 2017), treating women as a homogenous population (Tatli & Özbilgin, 2012), and omitting the role of gendered relations (Hoobler et al., 2018).

Thus, Hoobler et al. (2018) distinguish another three theories adapted by the business case research: the critical mass (Kanter, 1977a), upper echelons (D. C. Hambrick & Mason, 1984) and the social identity theories (Tajfel, 1974). These business case build on these frameworks argues about gender to influence firm performance by conditioning the quality of information-elaboration of a leadership team (D. C. Hambrick & Mason, 1984), regulating power dynamics (Kanter, 1977a) and conflicts (Tajfel, 1982). Nonetheless, motivated by the convenience of measurement and/or lacking a comprehensive framework, studies apply methods that reduce a concept of gender to a binary notation of biological sex (Hoobler et al., 2018; Mensi-Klarbach, 2014). In this fashion, a case for diversity acquires a descriptive character (Kirsch, 2018; Terjesen et al., 2009) and fails to examine a direct effect of gendered processes (Hoobler et al., 2018; Mensi-Klarbach, 2014). Thus, Hoobler et al. (2018) and

Mensi-Klarbach (2014) provide a set of recommendations, promising to end a debate over the impact of female leadership on firm performance.

Pursuing an objective of bringing clarity to the business case for women leadership, this study draws attention to the expectation states and status characteristics theory (Berger, Rosenholtz, & Zelditch, 1980). The expectations states theory (EST) suggests that workgroups tend to assign informal *statuses* to its members guided by traits cuing on individual's abilities to perform tasks (Berger et al., 1980). Within this framework, these indicators are called *status characteristics* and anticipated abilities – *performance expectations* (Berger et al., 1980). Being such trait and carrying over cultural beliefs about men's superior abilities (Berger et al., 1980; C. L. Ridgeway, 2001), gender conditions low status of women in work settings (Berger, Hamit Fisek, Ridgeway, & Norman, 1998; Cecilia L. Ridgeway, 2009; Cecilia L. Ridgeway, Johnson, & Diekema, 1994). Aggregated from performance cues members' statuses become a foundation to an informal hierarchy (Berger et al., 1980). The hierarchy determines individuals' influence, participation in tasks, and anticipates punitive actions when team members act in a way that delegitimates the order of authority (Berger, Ridgeway, Fisek, & Norman, 2006; Berger et al., 1980; Lucas & Baxter, 2012; Cecilia L. Ridgeway & Berger, 1986).

The author of this thesis suggests that the EST supplemented by Lucas' (2006) study offers a comprehensive explanation of leadership relations through a lens of informal statuses and enables its non-essentialist measurement, thus this theoretical program has an advantage over alternative conceptual frameworks applied in business case research. She sets an objective to design a status proxy and answer whether the concept of status better

explains gender interference with information exchange, healthy competitive environment and power dynamics in leadership teams compared to the SIT, UET, and CMT.

Thus, the research adopts the propositions introduced by Lucas (2006) to develop a gender-neutral leadership status proxy (GNL), which measures leadership abilities ascribed by society to women. In the next sections, an overview of theoretical propositions and limitations of the critical mass (CMT), upper echelons (UET), social identity (SIT), along with categorization-elaboration (Van Knippenberg, De Dreu, & Homan, 2004) and faultlines theories (Lau & Murnighan, 1998) is made. Further, this study hypothesizes how GNL influences corporate governance through same processes the concepts of cognitive maps (D. C. Hambrick & Mason, 1984), gender diversity (Kanter, 1977a) and *social identity* (Tajfel, 1974; Van Knippenberg et al., 2004) influence firm performance.

The OLS data analysis supported the research hypotheses. The results established a strong relationship between the esteem of female leaders and firm performance, implying that the cognitive capacities of a team improve as a gap between men and women status diminishes. The analysis of panel data also indicates that the improvement of informal status of women leaders balances a power distribution among team members and diminishes probability of conflict. Whereas a *critical mass* of women, in sense of a representation threshold empowering a minority to impact an agenda (Dahlerup, 1988), and *faultlines strength*, a degree of dissimilarity of subgroups that conditions frictions between them (Thatcher, Jehn, & Zanutto, 2003), had an insignificant impact on firm performance.

To further increase women representation in the corporate settings, this study proposes that public and organizational officials implement programs that would promote

cultures accepting female leadership. To design these programs and monitor progress, the officials may apply the GNL index. Nevertheless, due to novelty of this index, the author of this thesis work recommends that future research improve the accuracy of the GNL index by identifying and examining other macro-, meso- and micro-level indicators of FL culture. The future research can also address limitations of this study: the sample size consisting of medium and large size public companies, which are incorporated in 15 countries, and the ordinary least square regression analysis of data. Consequently, it is recommended to expand the sample size for greater resemblance with a population and apply less biased data analysis techniques.

Literature review

New Research Direction and Recommendations

In their works, Mensi-Klarbach (2014), Hoobler and colleagues (2018) examine the limitations of the existing business case approach and give directions to future research. According to them, the primary problem is a dominance of the *essentialist approach* founded on leadership duality, where a variation in outcomes is assumed to be rooted in a difference between women and men (Hoobler et al., 2018; Mensi-Klarbach, 2014). Thus, the business case measures gender diversity as an absolute number of individuals of a certain sex or their ratio within a given population (Hoobler et al., 2018; Mensi-Klarbach, 2014). As a result, a mechanism enabling or hindering female leadership to influence firm performance is overlooked (Hoobler et al., 2018), and the *black box dilemma* persists (D. C. Hambrick & Mason, 1984; Donald C. Hambrick, 2007; Hoobler et al., 2018; Lawrence, 1997). For instance, some scholars hypothesise about exceptional problem-solving skills of female leaders (Baker et al., 2019); others talk about different attitudes men have towards risk-taking (Cabeza-García, Del Brio, & Rueda, 2019). Cook & Glass (2018) and M. C. del Trina (2011) acknowledge women's unique skills, experiences and socialization approaches, later empowering them to improve strategic tasks and corporate social responsibility (CSR). However, business case studies fail to incorporate these factors into a tested model (Hoobler et al., 2018), consequently leaving their influence undetected (Kirsch, 2018).

Another argument against the essentialist viewpoint is its discourse, which antagonizes men and women leaders and overlooks persons' individuality (Mensi-Klarbach,

2014; Tatli & Özbilgin, 2012). Therefore, the approach counteracts the purpose of the business case and instead reinforces workplace segregation (Calás & Smircich, 1993; Kakabadse et al., 2015; Mensi-Klarbach, 2014). For instance, scholars assume women leaders to be better CSR champions compared to men due to their relation-oriented attitudes (Cook & Glass, 2018; Galbreath, 2018; Isidro & Sobral, 2015; Wiley & Monllor-Tormos, 2018). This trait is also believed to empower women leaders to cultivate corporate citizenship behaviors among employees that decreases a turnover and improves upward mobility of personnel (Ali & Konrad, 2017). Researchers also generalize about women pro-environmental stance (Kumar & Paraskevas, 2018) and ethics that add value to a success of a company (Adams & Ferreira, 2009; M. del C. Triana, Richard, & Su, 2019; Wahid, 2019). Undeniably, female leaders may act in the described way and produce hypothesized outcomes. Nevertheless, men and women are equally capable of demonstrating task or relations-oriented leadership styles (Gipson et al., 2017; Kubu, 2018; van Emmerik, Wendt, & Euwema, 2010). In fact, leadership is found to be highly individual behaviour (van Emmerik et al., 2010), signifying similarity rather a difference between women and men (Gipson et al., 2017; Kirsch, 2018; Seo et al., 2017). And yet, a recent study indicates a persistence of work segregation based on gender stereotypes, reporting that Western European companies tend to assign supervision of human resource management to women directors (Reichel, Scheibmayr, & Brandl, 2019). Furthermore, it appears that companies create a talent recriutment and management role if coerced to make a diversity appointment to a board of directors without a pre-existing position fulfilling stereotypically feminine functions (Reichel et al., 2019). Thus, a message of the essentialist studies may aggravate the work segregation (Mensi-Klarbach, 2014).

By resorting to a *social creativity* strategy, which concluded in a discovery and promotion of valuable attributes of a disadvantaged group (Chattopadhyay, Tluchowska, & George, 2004), business case research may also reinforce gender stereotypes. Similarly to standards created by descriptive political assignments (Meier & Severs, 2018), arguments in favour of women leadership in the corporate settings may set and normalize expectations, which have both positive and negative effect on women. Based on a role congruity theory and the fact that leadership associates with masculine traits (M. C. del Triana, 2011; Eagly & Karau, 2002; Sczesny, Bosak, Neff, & Schyns, 2004; Wolfram, Mohr, & Schyns, 2007), it can be assumed that addition of feminine dimensions to the leadership may improve the esteem of women in a position of power. Nevertheless, because the approach links abilities and traits with womanhood, this strategy can reinforce descriptive and prescriptive stereotypes (Mensi-Klarbach, 2014). Considering that women and men are rather similar (Gipson et al., 2017; Seo et al., 2017) and that women are by no means a homogenous social group (Grey, 2006), this approach may marginalize women who fail to meet the expectations.

Hoobler et al. (2018) and Holzhammer (2014) also refer to an ethical problem of the essentialist viewpoint. The issue is that this method celebrates gender differences to prove women worthiness and justify their equal treatment, instead of making an argument for equality regardless of differences (Holzhammer, 2014). Thus, this research design translates an idea of injustice. For these reasons, Hoobler et al. (2018) encourage a transition towards a non-essentialist outlook on women leadership that implies a ceasing the dichotomous representation of leadership. The new approaches should offer alternative measures that

would directly connect gender with corporate performance (Hoobler et al., 2018; Mensi-Klarbach, 2014).

However, even if scholars recognize gender as a social construct that influences interpersonal relationships, these studies also examine a link between sex ratio and firm performance (Hoobler et al., 2018; Mensi-Klarbach, 2014). Driven by computational convenience, they still counterpose women and men, building on constructed and reproduced patterns of gendered behaviours and attitudes (Hoobler et al., 2018). Therefore, Mensi-Klarbach (2014) stresses on another aspect of future research – a holistic theory, capable of reflecting the intricate role gender plays in the BODs performance.

Certainty, empirical studies support the role congruence theory, asserting that social attitudes and behaviours towards women leaders are conditioned by women compliance with gender and leadership stereotypes (Badura, Grijalva, Newman, Yan, & Jeon, 2018; Eagly & Karau, 2002; M. E. Heilman, 2001; Koenig et al., 2011). Other works demonstrate an complexity of interactions, where the assessment of leadership performance depends on the gender of an evaluator and those being evaluated, behaviours expressed by the latter, and the context (Ayman, Korabik, & Morris, 2009; Prime et al., 2009). Thus, gender processes indeed influence different levels of social organization and create a branching network of influence (Mensi-Klarbach, 2014; Cecilia L. Ridgeway, 2009). Studies also indicate a gradual improvement of the esteem of women leadership qualities (Hoobler et al., 2018; Koenig et al., 2011; van Emmerik et al., 2010), which suggests the recrystallization of social norms, beliefs and attitudes over time. Furthermore, social gender norms vary across different cultures (Amore et al., 2014; Post & Byron, 2015). Still, gender egalitarianism seems to

increase sensitivity to gender discrimination that amplifies a detrimental impact on employees' well-being and productivity (M. del C. Triana, Jayasinghe, et al., 2019). Consequently, acknowledging individual, group, as well as organizational and social gender influences (Mensi-Klarbach, 2014; Cecilia L. Ridgeway, 2009), Mensi-Klarbach (2014) recommends shifting towards a multi-level approach to the examination of gender diversity and corporate governance (Mensi-Klarbach, 2014).

Still, a significant amount of research on women leadership only implies agency of social pressures (Kirsch, 2018; Terjesen et al., 2009). Few theories are exploring means by which gender is influencing corporate performance (Terjesen et al., 2009). Hoobler et al. (2018) distinguish the critical mass, the social identity, and upper echelons theories that accommodate the idea of gendered processes supporting or inhibiting a contribution of heterogeneous leadership to firm's performance. Unlike other frameworks emphasizing the exclusive contributions of womanhood, these theories allow researchers to start a new thread of discussion, where gender regulates the communication and processing of information (D. C. Hambrick & Mason, 1984; Van Knippenberg et al., 2004), the power dynamics (Kanter, 1977a, 1977b), and a cohesion of a leadership group (Lau & Murnighan, 1998; Tajfel, 1974, 1982). Despite opening a conversation about gender role in leadership teams, these three frameworks lack a multilevel framework. Therefore, they cannot fully address the missing variable problem according to Hoobler et al. (2018) and Mensi-Klarbach (2014), unlike the expectations states theory proposed by Berger et al. (1980).

Expectation States Theory

The expectation states theory (EST) represents a research program, comprised of interlinked theoretical frameworks (Berger, Wagner, & Webster, 2014) and examines a collective body engaged in a problem-solving (Berger et al., 1980). More importantly, the theory sheds light on status-driven workgroup interactions (Berger et al., 1980; Cecilia L. Ridgeway, 1987). Berger and his colleagues depart from an idea that any team united by a shared goal tend to assess members' competences to effectively manage a collective work (Berger et al., 1980, 2014). As a result, workgroups establish a so-called *power and prestige order* with a corresponding nature of relations (Berger et al., 1980), which is based on members esteem determined by anticipation of one's superior and other's inferior contribution (Berger et al., 1980, 2014). Collectives develop expectations in a course of interactions, or by employing status characteristics that represent the attributes of individual carrying beliefs about performance abilities (Berger et al., 1980, 2014). The theory distinguishes two types of characteristics: *specific* and *diffused*, and presumes that all of them may have a non-fixed number of gradations of expectations (Berger et al., 1980). In correspondence to its title, specific characteristics have a narrow range of application, since they provide an idea about particular skills and knowledge (Berger et al., 1980). The diffused characteristics, being an umbrella of specific characteristics, produce a general conception about someone's expertise, therefore they apply to a vast range of situations (Berger et al., 1980). Sets of diffused and specific characteristics aggregate individual's status (Berger et al., 1980; Cecilia L. Ridgeway & Berger, 1986). Still, when a connection between a trait and task is unclear, an understanding of one's abilities is derived from discriminatory diffused

characteristics (Berger et al., 1980; Lucas, 2006). Thus, a status becomes a foundation of informal hierarchy (Mannix & Sauer, 2006; Cecilia L. Ridgeway, 1987; Cecilia L. Ridgeway & Berger, 1986; M. Webster & Rashotte, 2010).

The orders of authority are pervasive (Mannix & Sauer, 2006; C. Ridgeway, 1991), thus they interfere with group interactions determining members degree of task involvement and influence (Berger et al., 1980). These interactions are regulated by a *legitimation process*, which also determines their normative character (Johnson, Dowd, & Ridgeway, 2006; Cecilia L. Ridgeway & Berger, 1986). An informal hierarchical structure accrues *legitimacy* when congruent with culturally anchored beliefs of status differences (Berger et al., 1998, 1980; Cecilia L. Ridgeway & Berger, 1986; Cecilia L. Ridgeway et al., 1994). These beliefs also known as also knowns as *referential* (Cecilia L. Ridgeway & Berger, 1986). Their wide acceptance produces a sense of *validity* and *propriety* of order (Berger et al., 1998; Zelditch, 2001). Consequently, individuals *authorize* and *endorse* behaviours within boundaries of this order (Berger et al., 1998; Zelditch, 2001). In accordance with their status value, subjects participate in a decision-making process allocating opportunities, rewards, and influence (Berger et al., 1980; Bunderson, 2003; Cecilia L. Ridgeway & Berger, 1986). Importantly, team members accept or deny authority, thereby predetermining power dynamics and probability of discord (Berger et al., 1998, 1980). For example, a collective is expected to accept the influence of high- status members believing in a greater expertise (Berger et al., 1998; Thye, Willer, & Markovsky, 2006). The latter, being supported, would exhibit dominance by more frequently than others initiating a decision-making, conflict resolution, problem-solving (Berger et al., 1980; Cecilia L. Ridgeway & Berger, 1986). Indeed, it was observed that high-status people,

possessing more power, tend to focus on common goals, take more risks, and share knowledge (Bunderson & Reagans, 2011). Whereas, lower status individuals exhibited a reluctance to additional responsibilities (Gipson et al., 2017; Lucas, 2006), possibly due to penalties that may have followed after an attempt to exhibit dominant behaviours (Berger et al., 1998; Cecilia L. Ridgeway & Berger, 1986). According to the EST, these sanctions are a response to an inappropiate or illegitimate behaviour (C. Ridgeway, 1991; Cecilia L. Ridgeway, 1987; Cecilia L. Ridgeway & Berger, 1986). In this way, the legitimation process maintains the stability of authority order, irrespective to whether it is efficient or not (Johnson et al., 2006; Cecilia L. Ridgeway et al., 1994).

According to the EST, the salience of status characteristic is constrained by its relevance to a task (Walker, Thomas, & Zelditch, 2006). Despite similarities in women and men's managerial skills (Mensi-Klarbach, 2014), gender conditions legitimacy of leaders (Berger et al., 1980; Lucas & Baxter, 2012; Lucas & Lovaglia, 2006; Cecilia L. Ridgeway, 2009). Such phenomenon is connected with the fact that this diffused characteristic acts as an independent status indicator, assigning men and women a high and low status respectively (Rashotte & Webster, 2005; C. Ridgeway, 1991). Consequently, it influences an authority order and its legitimacy. Studies also establish that status cues are operationalized on a subconscious level (Jung, Vissa, & Pich, 2017; Rashotte & Webster, 2005), therefore, individuals and organizations tend to engage in status-driven interactions irrespective to their commitment to social justice principles (Chin, 2016; Rashotte & Webster, 2005). Thus, recognizing the pervasiveness of gender status beliefs, Rashotte and Webster (2005) see them as the root cause of bias in the workplace. They argue that performance expectations

cause prejudiced evaluations of performance and distribution of rewards (Jung et al., 2017; Rashotte & Webster, 2005). The proposed mechanism of legitimation appears to maintain systematic inequalities (Johnson et al., 2006; Walker et al., 2006) and enforce *glass ceiling* impeding women's career advancements (C. L. Ridgeway, 2001; Murray Webster, Whitmeyer, & Rashotte, 2004). Furthermore, status inequality conditioned by gender explains followers' diverging responses to male and female leadership (Brody et al., 2014). For example, Brody et al. (2014) report that in absence of gender-based difference in management styles, subjects subordinating to a male supervisor were characterized by a greater dedication to work and experienced lower psychological pressures in contrast with those who worked for female leaders (Brody et al., 2014).

Multi-Level Approach: The Neoinsitutional Theory

Ridgeway (1991), Ridgeway and Balkwell (1997) suggest that status beliefs originate from collective task-related interactions occurring between individuals who systematically have unequal access to resources. Over time groups develop expectations about members abilities and, because they correlate with members' demographics, they get associated with these traits (Cecilia L. Ridgeway & Balkwell, 1997). Furthermore, these expectations acquire a situational character that predisposes their transfer to people of similar characteristics and diffusion across society (Cecilia L. Ridgeway & Balkwell, 1997). Supported in the process of diffusion, beliefs become consensual and get embedded into culture (Kanter, 1977b; C. Ridgeway, 1991; C. L. Ridgeway, 2001), and, yet, they are not confined within social practices from which they originate.

Still, why referential beliefs permeate organizations (Jung et al., 2017; Kanter, 1977b) that are supposed to rely solely on an actual human capital in pursuit of maximization of profit (Grosvold & Brammer, 2011; D. C. Hambrick & Mason, 1984; Donald C. Hambrick, 2007)? Lucas (2006) asserts that this phenomenon is a result of an institutional process, called *isomorphy*. He elucidates that external beliefs and practices, when institutionalized, acquire normative character (Lucas, 2006; Lucas & Baxter, 2012). From survival considerations, business establishments adapt to social customs and norm (Lucas & Lovaglia, 2006; Tyrowicz, Terjesen, & Mazurek, 2020). For instance, business case studies resort to this argument to link gender diversity with CSR (Collins, 2012; Galbreath, 2018). If the practice of a norm fulfils the purpose, then it is selected and spread among an organizational field (Lucas, 2006; Lucas & Lovaglia, 2006). As soon as the field acquires a homogenous structure, practices existing within it are assimilated by all emerging entities (Lucas, 2006; Lucas & Lovaglia, 2006), as they are compelled to isomorph to the field in pursuit of legitimacy (Lucas, 2006). Therefore, arguing that gender status beliefs are a result of isomorphy, Lucas (2006) conducted an experiment, where he institutionalizes female leadership. By means of designed treatment, subjects learned that women and their leadership skills are highly valued in professional settings. The results of the experiment supported the proposition, as the treatment improved women leaders' esteem among participants (Lucas, 2006).

Social Institutes and Women Leadership Status

Thus, the combined EST and neoinstitutional theories provide a comprehensive picture of group interactions, thereby satisfying Mensi-Klarbach's (2014) recommendation. The link between macro-, meso-, and micro-level factors allows inference about shaping

social institutes beliefs being a proxy for a gender esteem. Still, to design a non-essentialist measurement of gender, it is required to understand the concept of *female leadership*, categories of beliefs and institutes reflecting social expectations from women leaders.

On the EST premise and Lucas (2006) experiment design, female leadership (FL) is a belief about women's advanced leadership abilities salient in task related settings. Certainty, the essentialist method is capable of indicating presence or absence of FL on a basis of Ridgeway (1991) argument that gender is a categorical variable where women associate with low status and men with high esteem. Nevertheless, this approach is efficient when societies are homogenous and static. This condition is rather ideal, as there are a spatiotemporal variations in social attitudes and beliefs towards gender (Donnelly et al., 2016; World Economic Forum, 2015, 2018, 2019). Therefore, it is critical for a measurement to reflect a relative character of status, indicating abilities in the context of a particular time frame and social unit. Since legitimation requires conformity with a prototype of competent leader that carries masculine characteristics (Koenig et al., 2011; Cecilia L. Ridgeway & Berger, 1986), the esteem of FL is relevant when compared to male leadership beliefs. In this case, it is meaningful to capture how gender-neutral a belief about leadership is. For this reason, this study introduces a term of gender-neutral leadership (GNL), which can be understood as a performance gap believed to be between men and women leaders, in other words, a degree of overlap between women and men's leadership abilities assumed by social norms.

Lucas' (2006) experiment demonstrates a significant effect of FL institutionalization on women status and influence. Thus, the first category of beliefs should reflect the social opinion about women leaders. Further, studies imply that not only organizational constraints,

but also the external circumstances lead to innovation and crystallization of a belief about men being superior and women having inferior task competences (Chattopadhyay, 1999; Chattopadhyay et al., 2004; C. Ridgeway, 1991; Cecilia L. Ridgeway & Berger, 1986). Thus, task irrelevant beliefs may also contribute to FL status (Rogalin, 2013). Building on the role congruence theory, Rogalin (2013) proposes that women's inferior performance expectations are conditioned by conflicting ideas about leadership and gender roles (Rogalin, 2013). Consequently, the set of cultural beliefs predetermining this incompatibility are the second category of norms constituting status. Since assignments for managing positions require academic credentials and professional achievement (Grosvold, Rayton, & Brammer, 2016), the third category of the beliefs should relate to the accessing opportunities for human capital and career development.

To the author's knowledge, the existing body of research lacks works identifying composites of female leadership or the GNL beliefs. Therefore, this study resorts to the closely related works, examining a board gender diversity from an angle of institutional theory because they are shaped by widely shared beliefs and norms that dictate what is right and acceptable (Grosvold & Brammer, 2011; Terjesen, Aguilera, & Lorenz, 2015; Tyrowicz et al., 2020) and, thus, motivate peoples' actions and attitudes (Ajzen, 1991, 2011; Lucas, 2006; Cecilia L. Ridgeway & Berger, 1986). For instance, Cabeza-Garcia et al. (2019) and Lowellyn & Muller-Khale (2019) assert that society, having gendered beliefs, may create or remove obstacles for women career development. Thus, the social acceptance and high esteem of women professionals and leaders would set *coercive* (regulatory), *mimetic* (best practices) and *normative* pressures (Allemand, Barbe, & Brullebaut, 2014), that should prompt

organizations to isomorph and have more women BODs (Lucas, 2006; Lucas & Lovaglia, 2006). Proceeding from this, institutes facilitating women directorship may also reflect female leadership or GNL beliefs. In this regard, this thesis work draws attention to the study conducted by Grosvold et al. (2016).

Unlike other studies that observed culture in a broader sense, for instance from aspects of masculinity, gender equality or parity (Cabeza-García et al., 2019; Lewellyn & Muller-Kahle, 2019; Tyrowicz et al., 2020), Grosvold & Brammer (2011) and Grosvold et al. (2016) narrow down the research scope by examining five social institutes. The first field thought to be influencing women representation in the boards is family (Grosvold et al., 2016). According to Grosvold et al. (2016), a customary character of a nuclear family structure hinders women's ascension to upper echelons of leadership. The findings established that single or divorced women have more successful careers that support a presumption about the importance of family institute for women directorship (Grosvold et al., 2016). Other evidence points to the family support system and family matters as having an effect on female leadership (Amin, Islam, & Sakhonchik, 2016; M. C. del Triana, 2011; Hideg & Shen, 2019). For example, covert sexism by an intimate partner has a detrimental effect on a woman's career (Hideg & Shen, 2019), as well as a status of primary breadwinner diminishes women leaders' esteem in the collectives (M. C. del Triana, 2011). Therefore, researchers assert that the social acceptance of women's non-conventional family status increases their chances of directorship (Grosvold et al., 2016). For the same reason, this work suggests that women leaders would be more accepted by society (Grosvold et al., 2016). Grosvold et al. (2016) list education as a second institute, assuming that comparable to men academic credentials

would improve women's esteem and lead to women's more frequent assignment to boards of directors. Education also creates a network of professional connections, enabling women to have more successful career development (Grosvold et al., 2016). Therefore, they hypothesize the association between greater women presence in boards with their higher education attainment (Grosvold et al., 2016). Consequently, the assumption can be made that women have to perceive their aspirations for education as a proper ambition. Such feeling can be produced when women's academic and professional development is socially accepted (Lovaglia, Lucas, Rogalin, & Darwin, 2006; Zelditch, 2001). Scholars acknowledge the role of the economy, government and religion in women's motivation to enter and grow professionally (Grosvold et al., 2016). For example, governments may pass board gender quotas (Allemand et al., 2014; Cabeza-García et al., 2019) or other legislature allotting women political and economic power (Lewellyn & Muller-Kahle, 2019). The organizations may introduce affirmative action policies (Dobson, Hensley, & Rastad, 2018). This study posits that economic and governmental decisions not only appear to be a factor empowering women leadership but also is an outcome of the social beliefs about female leadership. As per the isomorphy concept, these policies and programs have to be initiated by some forces. The process is triggered by coercive, normative and mimetic forces, which can be institutionalized beliefs (Allemand et al., 2014). Finally, Grosvold et al. (2016) connects the institute of religion, advocating for traditional norms and defines the gender role (Grosvold et al., 2016). The assumption is justified, as the research finds link between traditionalism and the esteem of women leaders (M. C. del Triana, 2011; Hideg & Shen, 2019). Still, Grosvold et al. (2016) statistically support the involvement of institutes in the establishment of women as a board

director with the exception of religion. This may be related to the fact that traditionalism is a broader concept encompassing both religion and family institutes (Tyrowicz et al., 2020). On other hand, it may be attributed to just to the family institute, as a study in Slovenia reports the return to traditional patterns of family life, despite a socialist past (Mrčela, 2017). Thus, it is possible to conclude that the institutes of education, economy, government, and traditional family would reflect the FL or GNL. Thus, based on this line of reasoning, this work developed a GNL index, measuring how gendered a concept of leadership within a given society. The details of its design are described in the methods section of this study.

Alternative Theories Review

Critical Mass Theory

Critical mass theory (CMT) postulates that an organizations' propensity for social homogeneity interferes with diverse group dynamics (Kanter, 1977a, 1977b). Dealing with uncertainties, organizations favour uniform collectives because they promote trust-based relationships, facilitate effective communication, simplify an assessment of members' abilities (Kanter, 1977a, 1977b). In other words, they provide a sense of control over group productivity (Kanter, 1977a, 1977b). Thus, the differentiation of social types is a common mode of operation (Kanter, 1977a). For this reason, the unbalanced representation puts women into the spotlight, making them *tokens* (Kanter, 1977a, 1977b; Laws, 1975). Male colleagues, who prevail in numbers, heighten awareness on women appearance, behaviour, and performance. Putting women under closer scrutiny, surroundings interact with women in a prejudiced manner (Kanter, 1977a, 1977b). Such attitudes are expressed as a fixation on

differences and exclusion of female colleagues from an information exchange (Dahlerup, 1988). As a result, these psychological and social pressures trigger coping mechanisms in women (Kanter, 1977b; Laws, 1975) that undermines the quality of their performance (Cook & Glass, 2018; Jehn & Bezrukova, 2010; Mensi-Klarbach, 2014; Torchia, Calabrò, & Huse, 2011).

Consequently, women get caught in the so-called *cycle of powerlessness* (Kanter, 1977a, p. 309) as their underperformance reaffirms the incompetence belief. According to the CMT, power is vested by structure capacity to achieve desired results, in spite of conflicting interests (Kanter, 1977a), often due to the access to some resource (Markovsky, Willer, & Patton, 1988; Sell, Lovaglia, Mannix, Samuelson, & Wilson, 2004). Thus, power is a main objective for women leader because its possession makes gender irrelevant. Power can be achieved via an influence on the work process (Kanter, 1977a). Kanter (1977a) states that women lack influence due to a historically predetermined belief in their inferior task abilities. This unfortunate predisposition diminishes women chances for support from superiors, peers, and subordinates. These circumstances motivate women to play safe and prevents them from the demonstration of creativity and relevance (Kanter, 1977a). Considering that the ability to consolidate support and demonstrate ingenuity are primary factors allotting influence, women are caught in the powerlessness cycle. Thus, Kanter (1977 a, b) hypothesized that the transformation of organizational composition may subdue the effect of this chain reaction. The idea is that with an increase in numbers, women stop being a rarity and colleagues of opposite sex are more likely to recognise women's individual competences. Allotted with recognized credentials influence is presumed to improve women's chances for

support and collaboration (Kanter, 1977a). In result, women leaders are expected to become empowered to employ their full professional potential. Despite the hypothesized gradual improvements in heterogeneous (non-*uniform*) teams, following the transitions from *skewed*, *tilted*, and, finally, *balanced* group, positive effect is believed to manifest when women's representation surpasses a 30% threshold, in other words, when women's critical mass is achieved (Cook & Glass, 2018; Dahlerup, 1988).

However, the CMT focuses on mesoscale processes. Formulating the theory, Kanter (1977b) argues that organizational-level relations are impacted by underrepresentation of women and irrelevant to gendered processes occurring on social and individual levels. Still, Dahlerup (1988) states that all these factors may impact women professional activities. For instance, they can be influenced by a level of social egalitarianism, which is a reoccurring line of thought in business case research (Amore et al., 2014; Ritter-Hayashi et al., 2019; Tyrowicz et al., 2020). Thus, conducting a meta-analysis, Hoobler et al. (2018) and Post & Byron (2015) established a statistically significant mediating effect of egalitarianism on women's contribution to firm productivity. So, the cross-country discrepancies and temporal dynamics reflected in the annual Global Gender Gap Reports (World Economic Forum, 2015, 2018) may be substantial to influence the magnitude of token and critical mass effects. Possibly for this reason, researchers struggle with finding the exact number of women constituting a critical mass (Dahlerup, 1988; Grey, 2006; Joecks et al., 2013; Mackey, Roth, Van Iddekinge, & McFarland, 2019; Torchia et al., 2011) and determining consistent trends between team heterogeneity and firm performance. For example, existing findings establish various relations from a linear (Amore et al., 2014; Carter et al., 2003; Cook & Glass, 2018; Li & Chen,

2018), curvilinear (Galbreath, 2018; Jia & Zhang, 2013; Joecks et al., 2013; Seierstad, Gabaldon, & Mensi-Klarbach, 2017; Valls Martínez & Cruz Rambaud, 2019; Wiley & Monllor-Tormos, 2018), to no relation between women representation and firm performance (Isidro & Sobral, 2015; Marinova et al., 2016).

Further, Kanter (1977b) assumes only two models of attitudes and behaviour (a women minority and men majority) that predisposes the essentialist method of gender measurement and dismisses the individual differences. For instance, highly discriminatory environment indeed stimulates a self-distortion in women leaders called *queen bee syndrome* (Derks, Ellemers, van Laar, & de Groot, 2011; Derks, Van Laar, & Ellemers, 2016; Faniko, Ellemers, & Derks, 2020). However, being predisposed to homogeneous organization (Kanter, 1977b; Skaggs, Stainback, & Duncan, 2012), they should be also invested in the professional development of female junior staff. Instead, Derks et al. (2016) reports that *queen bees* tend to express prejudice and bias towards other women. Furthermore, considering that women are no longer a rarity in corporate settings (Gipson et al., 2017; Gorman & Kmec, 2009; Lucas & Baxter, 2012), they still tend to underestimate their own (Dahlerup, 1988) and other women's competencies (Ostroff & Atwater, 2003; Prati et al., 2019), and value those of men (Skaggs et al., 2012; Williams, 1992).

Upper Echelons Theory

The upper echelons theory (UET) posits that a cognition of corporate leadership to be a contributing factor to firm's performance (D. C. Hambrick & Mason, 1984; Donald C. Hambrick, 2007). Hambrick & Manson (1984) depart from a scientific thought that emphasizes the role of behavioural patterns in leaders' decision-making. They argue that,

with the increasing complexity of strategic tasks, managers rely more on their cognitive maps or schemas, rather on a rational analysis based on sheer figures (D. C. Hambrick & Mason, 1984; Donald C. Hambrick, 2007). This means that leaders make their decisions founding on an interpreted version of their objective reality, which is influenced by the values, past knowledge and experiences (Carpenter, Geletkancz, & Sanders, 2004; Hughbank & Horn, 2013; Kumar & Paraskevas, 2018). In fact, their judgement is also limited by the way their cognition selects and processes information (D. C. Hambrick & Mason, 1984). Further, Hambrick & Mason (1984) emphasize on the examination of the leadership team, rather than a particular managerial position, since organizational governance depends on collective efforts and combined expertise is presumed to enhance the performance of the company (Donald C. Hambrick, 2007). Practically, due to the increasing role of cognitive paths in comprehensive tasks, such as strategic planning and risk management, heterogeneous top management teams (TMTs) are thought to have an advantage over homogeneous groups, as they offer diverse skillset and are immune to a groupthink (D. C. Hambrick & Mason, 1984).

The discussion about human and social capital a demographic group acquires throughout the lifespan enables business case research to elaborate on the effect of gender. Indeed, considering that stereotypes are stable and widely shared (M. E. Heilman, 2001) and that norms and attitudes produce consistent behavioural patterns (Ajzen, 1991, 2011), it is possible to form a generalized idea about cognitive schemas of women and men. Scholars over the years argue about the unequal concurrence of circumstances, conditioned by beliefs about gender roles that constrain women's professional development (Eagly & Karau, 2002; Kakabadse et al., 2015; Ostroff & Atwater, 2003; Prati et al., 2019; Prime et al., 2009). They

report about women leaders having a diverse career and academic paths (Cook & Glass, 2018). Unlike men, whose career advancement generally occurs in corporate settings, women develop their career working for not-for-profit entities or public sector (Cook & Glass, 2018; Post & Byron, 2015). However, giving a socio-cognitive perspective, the UET only describes the effect of cognition and psychology of leadership team (Carpenter et al., 2004; Donald C. Hambrick, 2007; Neely, Lovelace, Cowen, & Hiller, 2020) and leaves unspecified the way cognitive maps regulate the TMTs interactions (Bunderson & Reagans, 2011; D. C. Hambrick & Mason, 1984; Donald C. Hambrick, 2007).

In his later work, Hambrick (2007) acknowledges this problem linking it with challenges of socio-psychological study execution, which he sees in 1) a demand for extensive resources and a broad skillset from investigators, 2) lack of top managers and directors who would consent to participate in the research and invest some time for it (Donald C. Hambrick, 2007). Therefore, scholars frequently resort to demographic characteristics that are thought to substitute a direct measurement of cognitive processes and their effect on group interactions (Dwyer, Richard, & Chadwick, 2003; Donald C. Hambrick, 2007; M. del C. Triana, Richard, et al., 2019). Still, the ambiguity persists (Carpenter et al., 2004; Dwyer et al., 2003; Kirsch, 2018) and scholars emphasize a necessity in studies integrating cognition and behaviour (Abatecola & Cristofaro, 2020).

Theories Based on the Social Category Concept

Social Identification Theory

The social identity theory (SIT) postulates that people have their own interpretation of reality, which consists of ideas about categories they acquire during the *social categorization* process (Tajfel, 1974). Undergoing a *self-identification* process, subjects become aware of their affiliation with some categories. They learn about categories' worth, embrace norms and believes linked with social categories, and develop an emotional attachment (Tajfel, 1974). As a result, formed *social identity* creates a sense of belonging but also induces biased attitude towards ingroup and outgroup members (Haslam, Oakes, Reynolds, & Turner, 1999; Haslam et al., 1998; Tajfel, 1974). The latter happens on grounds of individuals' desire to maintain a positive esteem of themselves (Tajfel, 1974, 1982). This motivation compels subjects to favour people who are alike, which is a mild form of bias (Hewstone et al., 2002; Tajfel, 1982). However, it is not necessarily followed by prejudice directed towards an outgroup (Hewstone, Rubin, & Willis, 2002; Tajfel, 1982). For instance, subjects may be more lenient to their own kind and, at the same time, neutral to alien individuals (Hewstone et al., 2002; Tajfel, 1982). Still, when subjects perceive a threat to their esteem from a competition, social inequality, erosion of legitimacy, or social transformation, they exhibit outgroup bias (Tajfel, 1982). The amplitude of these negative circumstances determines the severity of intergroup bias and its transformation to prejudice and discrimination (Tajfel, 1982).

Categorization-Elaboration Theory

Presuming an inhibiting effect of sociopsychological factors on the leadership group interactions, researchers resort to the SIT framework to build the business case (Campbell & Mínguez-Vera, 2008; Roh & Kim, 2016; Schwab et al., 2016). Frequently, they examine conflicts hindering information exchange among group members (Bezrukova, Jehn, Zanutto, & Thatcher, 2009; Zanutto, Bezrukova, & Jehn, 2011), expecting them to have negative impact on the performance of diverse teams because of members' dissimilar identities (Jehn, 1995; Randel, 2002; Tajfel, 1982).

This assumption along with the UET argument about a positive effect of multifaceted experiences and skills of team members (D. C. Hambrick & Mason, 1984) implies a duality of diversity effect on the firm performance (Van Knippenberg et al., 2004). Therefore, Van Knippenberg et al. (2004) proposes a categorization and elaboration model (CEM) explaining how these two effects co-exist (Van Knippenberg et al., 2004). According to the CEM, the *elaboration process*, being about teams' information exchange abilities, determines the performance advantage of diverse collectives (Van Knippenberg et al., 2004). However, their productivity is disrupted by the categorization process which conditions biased relations in between teammates (Van Knippenberg et al., 2004). Still, the bias and conflict emerge only when either ingroup or outgroup challenges a social identity of their counterparts (Van Knippenberg et al., 2004). However, unlike previous studies that subdivided and examined traits based on hypothesized relation to the social categorization or information processing, the CEM expects any characteristic to enact both processes, consequently enhancing or degrading the effectiveness of teamwork (Schneid, Isidor, Li, & Kabst, 2015).

Faultlines Theory

The faultlines theory (FT) continues a conversation about contingencies, such as conflicts, degrading heterogeneous group interactions and quantitatively tests its propositions (Thatcher & Patel, 2012). Building on the relational demography theory and the SIT (Bezrukova et al., 2009), Lau & Murnighan (1998) assume that diverse group dynamics may be affected by group splits divided by so-called *faultlines*. Owing to multiple identities of individuals (Lau & Murnighan, 1998; Tajfel, 1974), the faultlines pass along the most clear-cut combination of differences. The degree of group splits is measured by a faultlines strength (FAU) that indicates how aligned group members are based on their demographics (Thatcher & Patel, 2012), and by the *faultlines distance* (Dg), which is the degree of disparity between subgroups (Bezrukova et al., 2009). These indices are assumed to reflect the probability of contingencies activation (conflicts, efficacy of information elaboration, etc.) and magnitude of their effect on collective efforts (Bezrukova et al., 2009; Lau & Murnighan, 2005).

Void Between the Social Categorization and Business Case Research

Both the social psychology and relational demography schools concur that acquisition of joint identity would result in greater team cohesion, which would produce social capital and reinforce subjects' commitment to a company they are working for (Chattopadhyay, Tluchowska, & George, 2004; Kramer, 2006). The FT researchers supported the idea by evidence. The study conducted by Bezrukova et al. (2009) observed teams with strong faultlines to remain productive when they were united by a strong sense of membership (Bezrukova et al., 2009). Other work on the dormant versus manifested faultlines also found

a significant contribution of the joint identity on conflicts' mitigation and formation of alliances, in spite of manifested faultlines (Jehn & Bezrukova, 2010).

Since subjects have to 1) be aware of membership, 2) understand a value of association, and 3) be emotionally attached to a group in order to identify with it (Tajfel, 1982), directors are supposed to share the BOD identity and demonstrate a high degree of cooperation. Firstly, BOD is a social entity with officially established roles, responsibilities and shared tasks (D. C. Hambrick & Mason, 1984), which supposed to raise awareness of membership. Secondly, a BOD membership should produce superior self-esteem and sense of value, due to prestige, power, access to resources, and affluence it provides (Schaffer & Riordan, 2011). Lastly, small stimuli, such as shared goals, are found to motivate ingroup formation (Kramer, 2006; Tajfel, 1982), therefore, strategic decision-making performed by directors should produce a sense of shared identity in BOD members (Seierstad, Gabaldon, et al., 2017).

In this case, homogenous and heterogeneous groups should differ only in information-elaboration capacities and business case researchers should produce consistent evidence of the superiority of diverse groups over homogeneous. However, gender persists to be a salient category in corporate settings (Chattopadhyay et al., 2004). According to the CEM, this fact implies a presence of salient social categorization processes and threats to gender identity (Van Knippenberg et al., 2004). The gender-based conflict may occur in cases when women or men leaders attempt to delegitimize a hierarchical structure, contest power, compete for resources, or initiate a gender-related confrontation (Tajfel, 1982). Considering BOD functions and objectives such as supervision, consultation, resources mobilization

(Nicholson & Newton, 2010), it seems unlikely for top leadership to introduce gender-sensitive questions in workplace relations. Also, BODs have a somewhat flat hierarchy with even power distribution and comparable human capital (Conyon & He, 2017; Lahlou & Lahlou, 2018; Seierstad, Gabaldon, et al., 2017; Terjesen et al., 2009), therefore, a chance for gender-based confrontation should be minimal. However, Tajfel (1982) writes about two additional causes for confrontations: a personal prejudice and social change that are associated with a threat to one's social standing. Thus, a conflict can relate to a perception of prestige difference between women and men constructed by society. Certainty, scientists recognize the role of status in social categorization and identification processes (Chattopadhyay et al., 2004; Lucas & Baxter, 2012; Sachdev & Bourhis, 1987, 1991). For instance, Chattopadhyay et al. (2004) conduct research asserting that individuals' behaviours are motivated by their status identity and gender is a feature indicating a status. Consequently, it is possible to assume that gender-based frictions may arise as a result of competing opinions of high-status men and low-status women (Cecilia L. Ridgeway et al., 1994; Wagner & Berger, 1997).

Notwithstanding, the SIT's focus on group processes (Kirsch, 2018; Terjesen et al., 2009) limits its ability to describe an agency of unequal status between women and men in a group interaction via a social identity concept. First, a difference in esteem is only a condition for acquisition of gender identity, and the SIT framework fails to elaborate on the relation between these two variables (Tajfel, 1974, 1982). Therefore, treatment of social identity and prestige as interchangeable concepts may still contribute to a missing variables problem.

Second, the SIT lacks sensitivity to a spaciotemporal difference in gender esteem because it provides a conceptual model of behaviour motivated by social identity (Tajfel, 1974, 1982).

Gender-Neutral Leadership and Performance

Before proceeding forward, it should be noted that this thesis runs on an assumption, where apart from gender, diffused and specific characteristics of boards of directors aggregate equal status, therefore, only gender contributes to differences in esteem. Recalling a brief overview, the UET and CEM share an idea that information-elaboration capacities condition an advantage of heterogeneous leadership over homogenous, as diversity is associated with superior firm performance (Hoobler et al., 2018; Van Knippenberg et al., 2004). Considering that an information processing capacity of team assumes input from every member (D. C. Hambrick & Mason, 1984), then prestige behaviours dictated by the status (Berger et al., 1980), explain the contingencies affecting the performance of gender-diverse group.

Resting on the EST and the neoinsititional theories, dynamics within a leadership team is also driven by the expectations shaped by norms and beliefs about leadership, which dictate demographics, competences, and performance qualities of the fittest candidate (Berger et al., 1998; Lucas & Baxter, 2012; Lucas & Lovaglia, 2006; Cecilia L. Ridgeway & Berger, 1986). It is established that leadership is regarded as a highly esteemed standing (Lovaglia et al., 2006; Lucas & Baxter, 2012). Therefore, social norms legitimize individuals with officially vested power if they possess valued status characteristics, while discrediting individuals if they carry traits indicative of low status (Lovaglia et al., 2006; Lucas & Lovaglia,

2006). Thus, low status of women leaders should delegitimate them due to incongruence with a status leadership position (Lucas, 2006; C. L. Ridgeway, 2001), which should limit women engagement in decision-making and problem-solving (Rashotte & Webster, 2005). For example, carrying beliefs about inferior performance abilities, peers may consider it as inappropriate to seek and accept women's expertise (Berger et al., 1980). Furthermore, women, agreeing with their standing, may follow the cultural scrips and withdraw themselves from the critical tasks (C. L. Ridgeway, 2001). Alternatively, women's expertise can be dismissed or applied to a limited extent due to another legitimation mechanism – *justification* (Zelditch, 2001). The evidence also shows that surroundings ascribe women's achievements to external factors rather to their leadership skills (M. C. del Triana, 2011; M. E. Heilman, 2001; Madeline E. Heilman et al., 2004). However, the neoinsitutional theory permits the assumption that women's status may vary depending on the social acceptance of FL. In case of equal esteem of women and men leaders, gender-diverse teams would rationally use their human capital and demonstrate better performance because all members would equally contribute to set goals. Furthermore, Lucas (2006) framework implies that institutionalized GNL would legitimize not only upper echelon women leaders but also lower-level female managers. Additionally, because the legitimacy of women leader appears to have a spillover effect on their team (Lucas, 2006), authorized and endorsed women leaders may improve the esteem of their subordinates. Consequently, gender esteem, dictated by culture, may advance performance at all levels of operations of any given company.

Hypothesis 1. If gender status beliefs regulate a degree of women leaders' and their subordinate's involvement in corporate governance, then greater social acceptance of GNL

would stimulate more effective utilization of human capital, hence, result in better firm performance.

Scholars point to other factors affecting information elaboration and exchange – influence and power (Chung, Ko, & Kim, 2020; Inesi & Neale, 2007). For example, Hambrick and Mason (1984) argued that performance depends on a collective effort of managers. Later Hambrick (2007) suggests considering power dynamics in the examination of leadership and governance. Kakabadse et al. (2015) also recognize the role of power in the BODs' relations. They argue that a disproportionate distribution of power permit members with more resources to shape an agenda and introduce discriminating practices (Kakabadse et al., 2015).

Among all the discussed theories, the CMT is a framework that addresses a question of discrimination, power, and influence (Dahlerup, 1988; Kanter, 1977a). One may argue that the FT also tackles this problem, yet, a closer look reveals that the theory regards a power dynamics in terms of subgroup size, the effect of which is conditioned by concepts of token status and numerical transformation (Chung et al., 2020; Lau & Murnighan, 1998). Thus, the CMT asserts that women tokens, being subjected to phycological and behavioural constraints, find it difficult to overcome prejudice and have their personal credentials seen (Kanter, 1977b). The way out from such situation is thought to be an increase of women representation, particularly, the achievement of critical mass (Dahlerup, 1988; Kanter, 1977b, 1977a). A balanced representation of individuals of both genders permits peers and subordinates to perceive women as individuals and give women the opportunity to form coalitions (Torchia et al., 2011). According to business case studies and the CMT, skewed and tilted teams with arbitrary 0-20% and 20-40% of women representation are assumed to

experience social pressure the most (Joecks et al., 2013; Kanter, 1977a; Laws, 1975; Mackey et al., 2019). Their underrepresentation increases visibility of women that triggers a stereotyping (Joecks et al., 2013) and biased opinions about women contributions and their credentials (Mackey et al., 2019). The CMT suggests that a numerical representation would empower women (Kanter, 1977a; Torchia et al., 2011). However, Dahlerup (1988) questions the sole effect of token status and suggests that women social status might have an impact on power dynamics, denoting a direct effect of gender on group relations.

Drawing on the EST concept of status and persistence of hierarchical structures, Lovaglia et al. (2006) propose another explanation of the problem. They agree with Kanter (1977a) on interconnectedness of power, influence and esteem (Lovaglia et al., 2006). Still, the CMT presumes that influence and esteem matter only when subjects lack official power, and that power allots means to fulfil their work, therefore, it would diminish resistance to women's authority (Kanter, 1977a). Lovaglia et al. (2006), on the other hand, hold an opinion that the surroundings can resist an application of official power. They hypothesize that such behaviour degrades esteem and influence of a leader (Lovaglia et al., 2006). Defiance can be triggered by the illegitimacy of the authority of women leaders based on their low status. Particularly, perception of incompetence contests women's right to use of power (Lovaglia et al., 2006). Certainly, studies report that women to be the most influential when surroundings learned about their high abilities, meaning that anticipation of high performance improved women's prestige (Cecilia L. Ridgeway, 1987). In other treatment modes, low-status women were less influential, even if they exhibited dominating behaviours (Cecilia L. Ridgeway, 1987). This leads to a conclusion that women directors, despite having somewhat equal

power with male counterparts, may exert less influence (Lovaglia et al., 2006; Lucas & Baxter, 2012; Walker et al., 2000; Willer, Lovaglia, & Markovsky, 1997), and consequently fail to contribute to firm performance.

Hypothesis 2. If status, rather than tokenism, decreases the acceptance of power and influence of women leaders, then, in societies with high GNL, token female directors are expected to improve firm performance. Whereas, in societies with low GNL, boards with critical mass of women will significantly underperform, as women authority is more likely to be perceived as illegitimate.

The business case studies hypothesize advantages of gender-diverse teams to be also contingent to conflicts and expects these frictions to have a diminishing effect on performance (Campbell & Mínguez-Vera, 2008; Conyon & He, 2017; Valls Martínez & Cruz Rambaud, 2019). Van Knippenberg et al. (2004) suggests that social categorization predisposes heterogeneous teams to conflicts, as all types of diversity are capable of initiating this process. Still, they assert that frictions occur when categories are relevant to context and one's social identity is challenged (Van Knippenberg et al., 2004). When these conditions are met, intergroup competition disrupts information processing and negatively impacts organizational administration (Van Knippenberg et al., 2004). Thus, the SIT and CEM presume gender influence on group interactions (Chattopadhyay et al., 2004; Guillaume et al., 2017), yet, fails to explain why gender is a salient social category in work settings (Mensi-Klarbach, 2014). The same is true for the faultlines theory because its resources to the SIT and CEM principles to support the demographic group splits (Thatcher & Patel, 2012). Earlier, the author of this work argues that a status difference between women and men determines

gender interference with relations of task group. Given that the assumption is true, the SIT does not specify the nature of status and its relationship with social identity.

The EST, on other hand, provides a more exhaustive explanation to gender relevance in organizational settings and its impact on corporate governance. Thus, the theory informs that the interactions of a task group are regulated by a legitimation process (Cecilia L. Ridgeway & Berger, 1986), which is sustained widely-shared beliefs of propriety and validity of a given informal hierarchy and prescribed by it norms (Zelditch, 2001). Considering that sanctions are a response to a violation of an order (Berger et al., 1998, 2014; Cecilia L. Ridgeway & Berger, 1986), it is rational to think that violator's act of defiance is motivated by an opposing opinion regarding the status quo. Such situation signifies an existence of disagreement between team members, which is by a definition is a conflict (Greer & Jehn, 2007). Further, the EST asserts that a high status allots an individual to engage in more complex task and influence a decision-making and predisposes others to evaluate highly work delivered by that individual (Berger et al., 1980, 2014; Walker et al., 2000). By the same logic, a low status restricts individual's functioning (Berger et al., 1998; M. Webster & Rashotte, 2010) on a basis of norms and rules legitimizing the order (Zelditch, 2001). If so, then the lower a status sets stricter behavioural constraints (Foschi, 2000), which a person is more likely to accidentally or purposefully violate. Since gender is a status constituting factor (C. Ridgeway, 1991; C. L. Ridgeway, 2001; Cecilia L. Ridgeway, 2009), associated with it unequal expectations should set more rigid rules for women (Rashotte & Webster, 2005; Cecilia L. Ridgeway, 2009), thus predetermine a probability of conflict. Certainly, under these conditions, the presence of women on board of directors would associate with more conflicts,

because, despite being a low-status member, women are engage in a prestigious leadership duties (Lucas, 2006; C. L. Ridgeway, 2001). This incongruence delegitimizes the authority order, compelling surroundings to perceive women's actions and decisions as inappropriate, and defy their authority (Lucas, 2006; C. L. Ridgeway, 2001). As a result, confrontations between women and men directors negatively influence the quality of company management (Campbell & Mínguez-Vera, 2008; Conyon & He, 2017; Valls Martínez & Cruz Rambaud, 2019).

Still, recent development in conflict research informs about its dual nature, differentiating an effect of *relational (affective*) and *process (cognitive*) disagreements (Amason, 1996; Amason & Sapienza, 1997; Jehn, 1995; Sell et al., 2004). Scholars support their argument by building upon a dependence of quality decision-making on the environment encouraging a functional dialogue, active participation, critical and inquisitive thinking (Amason, 1996; Sell et al., 2004). They posit that cognitive conflict associated with an openness to a constructive critique creates a healthy competition among teammates (Amason, 1996; Carpenter et al., 2004). Constructive debates are more likely to occur in stable status structures that convey clear rules of conduct (Mannix & Sauer, 2006). The affirmative conflicts, on the other hand, have a negative effect on teams and their collective efforts (Amason, 1996). Such confrontations take place when a critique is taken personally or member's authority is contested (Amason, 1996; Amason & Sapienza, 1997; Inesi & Neale, 2007; Jehn, 1995; Sell et al., 2004).

Considering that gendered performance expectations are distantly relevant to a task, and yet, determine teammates' honour, involvement in and influence on joint activities

(Berger et al., 1980, 2014), they may produce a sense of injustice resulting in affective conflict. Indeed, Greer & Jehn (2007) establish that perceived inequality escalates a confrontation and diminishes the productivity of a team. In fact, this feeling is evoked by unfairly set obstacles for expression and realization of one's ideas (Greer & Jehn, 2007). Since the EST explains these barriers as an obstruction to women's power due to their low status (Lucas, 2006; Cecilia L. Ridgeway et al., 1994), women directors may compete for influence to compensate their disadvantaged position and fulfil their obligations before shareholders (Lahlou & Lahlou, 2018; Lovaglia, 1995; Nicholson & Newton, 2010; Thye et al., 2006; Willer et al., 1997). In response, high-status individuals may perceive such action as an encroachment on their prestige and honour, which, according to the legitimacy principle, they are entitled to (Zelditch, 2001).

Ridgeway (2001) notes that other status characteristics affect a level of gender interference in team relations. Thus, it can be assumed that salience of gendered beliefs regulates the probability of relational conflicts, as it determines a degree of inequality and power imbalance (C. L. Ridgeway, 2001; Cecilia L. Ridgeway, 2009). For instance, when imagining an ideal situation of gendered beliefs, an absence of bias should stimulate meritocratic assignments to the boards (Terjesen & Sealy, 2016). Under such conditions, informal prestige order would be based on directors' specific (task-related) characteristics (Berger et al., 1980). Furthermore, similar qualifications, predetermined by a somewhat flat organizational structure of BODs as well as same monitoring and advising responsibilities (Lahlou & Lahlou, 2018; Nicholson & Newton, 2010), should aggregate equal statuses (Berger et al., 1980). Since status determines one's influence (Lucas & Baxter, 2012; Walker et al.,

2000), directors also should possess equal power. Thus, in established prestige order, only diverse skills and experience of team members would stimulate constructive debates (Amason, 1996; Carpenter et al., 2004). However, with salience of gendered beliefs aggravating inequality (Cecilia L. Ridgeway, 2009), the likelihood and severity of conflicts are expected to increase.

Considering that studies posit that gender salience also depends on culture (Rashotte & Webster, 2005; Cecilia L. Ridgeway et al., 1994). Consequently, social norms regarding gender neutrality of leadership may predict cognitive or affective conflicts, consequently their effect on the quality of governance.

Hypothesis 3. If gender conditions the probability of conflict and its severity via a concept of status rather than social category, then in societies sharing beliefs about the GNL, tilted boards with strong faultlines will contribute to firm success, whereas, in cultures with masculine leadership (low GNL) more gender balanced boards and with weak faultlines will underperform.

Methods

Gender-Neutral Leadership Index

As a basis of gender-neutral leadership index, this work uses information published in the Global Gender Gap Reports (GGGR) (R. Hausmann, L. Tyson, 2010, 2011, 2012; World Economic Forum, 2013, 2014, 2015, 2016, 2017, 2018, 2019). This widely accepted resource (Collins, 2012; Mensi-Klarbach, 2014; Post & Byron, 2015; Schneid et al., 2015) offers several advantages: open access, annual updates with global data, and detailed contextual information on social institutes. Unlike previous studies that rely on the GGGR (Post & Byron, 2015), the author of this study selected a set of subindices in the GNL design to exclude data irrelevant to the institutes of family, education, government, and the economy. Also, this work avoids subindices that may potentially be affected by affirmative action, for instance the GGGR subindices reporting on ratios of women in leadership, because they may misrepresent social beliefs and norms about female leadership. Such conclusion is derived from studies informing about a debate over a quota (Engelstad, 2012; Terjesen & Sealy, 2016) that at times finds no reflection in data (Seierstad, Gabaldon, et al., 2017). For example, in case of Norway, data report about a success of board quota model, failing to account for companies that changed their legal status to avoid the requirement (Seierstad & Huse, 2017; Terjesen & Sealy, 2016). Thus, they provide an incomplete picture of social opinion about female leadership. Another argument against the application of such information is a nature of social engagement in the debate. Studies note a major role of interest groups is initiation and promotion of questions related to women's rights and social justice (Seierstad, Gabaldon,

et al., 2017; Seierstad, Warner-Søderholm, et al., 2017). Consequently, nationwide decisions may reflect the values and norms of small groups, who actively participate in the political life of a country.

Therefore, to ensure representativeness of GNL, this work resorts to the GGGR subindices that reflect either opinions, expressed directly via surveys, or indirectly through collective actions. This decision is resting on the theory of planned behaviour (Ajzen, 1991, 2011) and the neoinstitutional theory (Lucas, 2006), which suggest that beliefs and attitudes systematically motivate subjects to exhibit repetitive behaviours and, being widely shared, they predetermine homogeneity behaviours across a population. Consequently, the research narrows down its focus to social trends, elections, legislative and judiciary decisions. Also, it accounts for changes in the methodology of the Global Gender Gap Report. Only subindices, methods of which remained constant throughout the observed period of time or permitted the recalculation in accordance with the new method, were applied.

For an assessment of the GNL reflected in economic institutes, this work relies on survey data on women's opportunities for leadership (o_n), information on wage gap (w_n) and enrollment to STEM programs (k_{n+3}) provided in the GGGR for an observed year (n). Women's opportunities for leadership (o_n) provides an insight on organizational barriers hindering women ascending to the upper echelons reported by female executives (World Economic Forum, 2018). Considering that organizations isomorph to the external environment (Lucas, 2006), challenges are presumed to correlate with the legitimacy of women leadership. Further, Mackey et al. (2019) associate evaluations of women's performances with biases originating from gender role incongruence. On a supposition of

meritocratic hiring and career development practices, women and men are expected to perform similarly, consequently reimbursed equally and have same directorship opportunities. In fact, Terjesen and Singh (2008) established a direct relation of women BODs and wage parity in a given country. Consequently, deviations measured by the GGGR wage gap (w_n), would be indicative of bias about women leaders and their performance.

Considering that gender stereotypes are linked with systematic enrollment of women in non-STEM programs (Chevalier, 2007; May & McGarvey, 2017; Smeding, 2012; Tenenbaum & Leaper, 2003; Tiedemann, 2000) and work segregation (May & McGarvey, 2017; Ostroff & Atwater, 2003; Seierstad, Warner-Søderholm, et al., 2017), the information about abilities expectations society places on women can be also inferred from academic fields the latter are pursuing. By drawing an analogy with the Ridgeway (1991) process of institutionalization of beliefs, the uneven distribution of women professionals may facilitate emergence, dispersion and validation of beliefs about women's abilities affecting their status. Thus, the GNL index incorporates discrepancy in enrollment of women and men in STEM programs. The Global Gender Gap Reports breaks down information about graduates completing tertiary education (R. Hausmann, L. Tyson, 2010, 2011, 2012; World Economic Forum, 2013, 2014, 2015, 2016, 2017, 2018, 2019). Therefore, the GNL included information on 1) engineering, 2) IT and communications, and 3) natural sciences disciplines following the STEM definition of the World Economic Forum (2016). Since, the GGGR subindex represents graduates (World Economic Forum, 2014), data on student cohort graduated after three years of studying (k_{n+3}) are included into the GNL with aim to account for decisions driven by their beliefs held at the time of enrollment.

Lucas (2006) report on women's avoidance of leadership opportunities and preference for consulting or alike functions. Regarding that such macro-scale behavioural pattern may result from impropriety and invalidity of women leadership (Lucas & Lovaglia, 2006; Zelditch, 2001), a willingness to compete for an ultimate leadership position, like the head of state, and public votes for women prime minister or president may be considered as a direct indicator of social acceptance of the FL. Further, based on *path dependence* principle asserting that historical development of social and political institutes influence their evolution (Gabaldon, Mensi-Klarbach, & Seierstad, 2017; Pierson, 2000; Terjesen et al., 2015), past elections would indicate social trends of FL acceptance. Therefore, gender parity in time spent as a head of state in the past 50 years (h_n) (World Economic Forum, 2014) are included in the GNL index.

The GNL beliefs should manifest not only during the election processes but also in state-wide decisions, such as legal frameworks concerning work-life balance (Feldman & Gran, 2020; Grosvold & Brammer, 2011; Terjesen & Singh, 2008). It is well established that women's professional development is hindered by a *motherhood penalty* (Grosvold et al., 2016), when presence of measures securing women's economic independence and facilitating their return to the workforce improves women's chances for becoming board directors (Chevalier, 2007; Grosvold & Brammer, 2011; Grosvold et al., 2016; Terjesen et al., 2015). Paternity leave is one of such measures as it seems to redistribute non-paid household duties, decrease a wage gap among parents (Andersen, 2018; Feldman & Gran, 2020; Rehel, 2014), and retain women in labour markets (Amin et al., 2016). So, another constituent of the GNL index is parity in parental leave (c_{2018}). As a base for an equation, this study uses

Andersen's (2018) approach, where she considers paternity leave in relation to maternity leave (pl_{2018}). Still, it also introduces a parity in leave compensation (pr_{2018}) because Andersen (2018) noted importance of economic incentives in a brief overview of examined reforms. Finally, the author of this work adds a dummy variable (ml) to distinguish countries with and without nation-wide right for a maternity leave. Since, in period from 2014-2016 the Global Gender Gap report had inconsistent format of metadata (World Economic Forum, 2014, 2015, 2016), this research extracted information from a 2018 report (World Economic Forum, 2018) and treated a parity in parental leave as a constant (c_{2018}) (Equation 3).

$$pl_{2018} = \frac{pd}{md}, \qquad (1)$$

where pl_{2018} is the parity in the parental leave duration, md is the maternity leave period (days), pd – the paternity leave duration.

$$pr_{2018} = \frac{pw\%}{mw\%}, \qquad (2)$$

where pr_{2018} is a party in the childcare reimbursement, $mw\%$ and $pw\%$ are a per cent wage paid during the maternity leave and paternity leave.

$$c_{2018} = ml * \frac{pl_{2018} + pr_{2018}}{2}, \qquad (3)$$

where a ml is a nationwide entitlement for the parental leave $\in [0,1]$.

The last component of the GNL is gender parity in the part-time labour force participation (l_n). The scholarly works find more women than men to be employed part-time, connecting this trend with family obligations women are bounded by (Andersen, 2018; Grosser & Moon, 2019). Considering that leadership positions requires significant

professional involvement and commitments, societies emphasizing traditional family values would more likely to limit women's participation in the labour force, favouring their part-time employment (Rehel, 2014). Whereas, societies accepting FL would create conditions for women professional development (Donnelly et al., 2016). Therefore, they would report parity in the part-time labour force.

This is a first attempt to evaluate the GNL and, to the author's knowledge, a degree of relation between individual indicators with the GNL norm has not been previously established. Consequently, the study assigns all variables equal weight, and consider the GNL to be their average value (Equation 4). The GNL index ranges from 0 to 1, where the upper limit signifies the absolute dissociation of leadership with gender.

$$GNL = \frac{o_n + h_n + w_n + l_n + k_{n+3} + c_{2018}}{j}, \qquad (4)$$

where j – the quantity of indicators in the numerator.

It is important to note that this work designed a principle of c_{2018} and $the\ GNL$ computation. Information on the methodology of other subindices can be found in the GGGR (R. Hausmann, L. Tyson, 2010, 2011, 2012; World Economic Forum, 2013, 2014, 2015, 2016, 2017, 2018, 2019).

Data

Dataset

Constrained by the GGGR methodology, this thesis considers the composition of the board of directors within a period from 2014 to 2016. Since, the study presumes assimilation

of leadership norms by a firm (Lucas, 2006), and because Allemand et al. (2014) specify coercive, normative and mimetic drivers of isomorphy, it was important to ensure that societies are able to influence organizations. Thus, the sample size constituted companies that were incorporated in countries with 1) above 2010 world average gross national income per capita (converted into current international US dollars, using the purchasing power parity), 2) characterized by a full or flawed democracy, 3) free to moderately free markets, and 4) were represented in the GGGR from 2010-2018.

The selection was fulfilled by accessing data from the World Development Indicators database of the World Bank (The World Bank, 2019a), the Democracy Index (The Economist Intelligence Unit, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019) and the Economic Freedom Index (T. Miller, A.B. Kim, J.M. Roberts, B. Riley, 2017; T. Miller, A.B. Kim, J.M. Roberts, P. Tyrrel, 2018; T. Miller, A.B. Kim, 2014; E.J. Fenler T. Miller, K.R. Holmes, 2013; E.J. Feulner T. Miller, K.R. Holmes, 2012; T. Miller, 2015, 2016)

Accounting for peculiarities of corporate law requirements and business operations, the sample included only surviving public parent manufacturing companies (SIC 2000-3999) of medium and large market capitalization by the Standard & Poor parameters (A Global Division of S&P Global, 2019). The fundamentals and securities information were retrieved from the Compustat database. A focus on this research dictated the elimination of countries with less than five companies governed by heterogenous boards. To account for variations in corporate boards' structures (Seierstad, Gabaldon, et al., 2017), information on teams indicated as "supervisory" and "boards of directors" was gathered.

Table 1. Sample breakdown by countries and year with the specification of gender-diverse boards

	Boards, #					
	2014		2015		2016	
Country	with WBODs	Total	with WBODs	Total	with WBODs	Total
Australia	10	10	8	8	9	9
Canada	15	17	16	18	18	19
Denmark	6	8	8	8	7	7
Finland	10	10	9	9	9	9
France	27	27	27	27	27	27
Germany	13	13	13	13	17	17
Ireland	9	9	9	9	10	10
Italy	5	5	5	5	0	0
Japan	28	125	40	141	55	150
Norway	5	5	5	5	5	5
Sweden	21	21	21	21	22	22
Switzerland	13	17	15	18	16	20
The Netherlands	8	11	8	11	9	11
The United Kingdom	30	30	27	27	25	25
The United States	249	290	256	296	271	296
Total	449	598	467	616	500	627

Sources: Institutional Shareholders Services database, Bloomberg database, EDGAR database, and official websites of companies

Table 2. Characteristics of boards by country

Country	WBODs	Average Age of BOD	Average Tenure of BOD	Average BOD Size
Australia	2.19	60.16	5.13	8.19
Canada	1.78	62.98	9.17	10.22
Denmark	1.70	55.71	5.57	9.96
Finland	2.18	58.46	4.74	7.93
France	4.41	58.66	6.63	13.33
Germany	3.95	56.28	5.38	21.19
Ireland	2.25	60.20	6.68	12.71
Italy	3.40	56.50	2.82	11.80
Japan	0.34	62.51	5.02	10.42
Norway	3.53	56.18	4.51	9.53
Sweden	3.36	56.78	5.80	11.20
Switzerland	1.47	59.32	6.60	9.13
The Netherlands	2.33	59.23	4.76	10.36
The United Kingdom	2.43	58.30	4.93	10.07
The United States	1.71	62.44	8.55	9.98

Sources: Institutional Shareholders Services database, Bloomberg database, EDGAR database, and official websites of companies

Demographics were collected manually from documents published on official websites of companies (e.g., annual reports, corporate governance reports, notices of shareholders meetings) or uploaded securities filings to EDGAR database. Some data regarding the US boards were retrieved from the Institutional Shareholders Services (ISS) database. Other missing demographics ware supplemented by information from the Bloomberg database, otherwise, companies with missing demographics were discarded from the sample. The tabulated information on metadata sources is in Appendix I. Information about the countries entered in the sample, the demographics of directors and boards characteristics are provided in Tables 1 and 2.

Variables

Firm Performance

Despite a plethora of key performance indicators (Marinova et al., 2016; Post & Byron, 2015; Valls Martínez & Cruz Rambaud, 2019; Wiley & Monllor-Tormos, 2018), this research focuses on a company's financial success because of association of non-financial performance with women's innate abilities (Cook & Glass, 2018; M. C. del Triana, 2011), which is an essentialist paradigm this thesis work attempts to depart from. Further, Valls Martinez & Cruz Rambaud (2019) report that market-based measures convey information about external shareholders' expectations of future performance, which would be a favourable option for this study as it may provide insights on shareholders attitudes toward the female leadership. Still, because this study encompasses mid and large size companies, market-based measurements may reflect the international GNL beliefs instead of national. Whereas,

accounting-based performance represents results of leadership team governance (Valls Martínez & Cruz Rambaud, 2019), whose members are carriers of the culture or have to comply with national norms and beliefs, proceeding from the institutional theory and legitimation concept (Lucas, 2006; Lucas & Lovaglia, 2006; Zelditch, 2001). Thus, this work resorts to a return on assets (ROA) as a performance measure. Return on assets is calculated by dividing net income by total assets reported two years after board assignment (Adams & Ferreira, 2009; Adusei, Akomea, & Poku, 2017; Conyon & He, 2017; *Encycl. Financ.*, 2006).

Gender-Neutral Leadership index

The GNL index is described in the gender-neutral leadership index section above, and data is provided in Table 3.

Table 3. Gender-neutral leadership scores by country and year

Country	2014	2015	2016
Australia	0.4405	0.4452	0.4792
Canada	0.3789	0.3527	0.3845
Denmark	0.5014	0.5168	0.5427
Finland	0.5271	0.5402	0.5711
France	0.4103	0.4222	0.4812
Germany	0.3509	0.3452	0.4059
Ireland	0.5705	0.5587	0.5769
Italy	0.3405	0.3586	
Japan	0.3759	0.3542	0.3606

Country	2014	2015	2016
Norway	0.4399	0.454	0.5036
Sweden	0.4443	0.4781	0.5182
Switzerland	0.3384	0.3458	0.3926
The Netherlands	0.4183	0.4297	0.456
The United Kingdom	0.4642	0.4592	0.4957
The United States	0.3569	0.3583	0.3853

Gender Diversity

The body of research on the business case estimates gender diversity as a level of heterogeneity, reflected by Blau or Shannon indices (Campbell & Mínguez-Vera, 2008; Valls Martínez & Cruz Rambaud, 2019) or as a percentage of women directors (Marinova et al., 2016). This study presents gender diversity as a number of female directors (WBOD) (Cook & Glass, 2018).

Faultline Strength

Along with gender, groups tend to form faultlines based on age and tenure (Thatcher & Patel, 2012). Assuming that boards divide into two subgroups based on these three attributes, the author measures how clearly defined the splits are (FAU). Due to a large sample size, the group splits were identified via the K-means cluster analysis calculating a squared Euclidian distance (Jobson, 1992; Mirkin, 2013; Wu, 2012; Zanutto et al., 2011). The FAU was estimated in accordance with the method designed by Thatcher et al. (2003).

Interaction Dummies

The work introduces a set of dummy variables to test hypothesis 2 and 3, examining the interactions of GNL with gender diversity and interaction of GNL with gender diversity and the faultlines strength respectively.

The GNL dummies denote a highly valued GNL (GNL_H) and undervalued female leadership (GNL_L). This study uses a sample average as a threshold to distinguishing high and low GNL.

The gender diversity dummies represent homogenous boards (NWBOD), teams with critical mass (CRM), and tilted boards (TILTED). Unlike Kanter (1977b), this study does not make a distinction between groups with tilted and skewed female representation; instead, these two categories are merged together. The boards with critical mass of women directors have 3 or more women, who compose over 30% of a team (Joecks et al., 2013). Otherwise, the boards are defined as tilted or homogeneous, depending on women presence.

This work dismisses the threshold suggested by Zanutto et al. (2011), due to the difference in the input data. Instead, the author uses the sample average to construct the dummies of strong and weak faultlines, labelled as FAU_S and FAU_W respectively.

The sample sizes of subset data can be found in Tables 4 and 5.

Micro-Level Control Variables

The existing studies reported about a positive association of director's age and tenure on firm performance (Adams & Ferreira, 2009; Li & Chen, 2018; Marinova et al., 2016), these variables may also influence an informal status of board members (Berger et al., 1980;

Bunderson, 2003; Li & Chen, 2018). For this reason, this research controls the effect of those variables. DIR_TENURE and DIR_AGE represent a mean age and tenure of board members in a given year. The term tenure is understood a number of years of directorship in a given company (Van Peteghem, Bruynseels, & Gaeremynck, 2018).

Carpenter et al. (2004) recommends controlling the board size (BOD_SIZE) effect as it independently affects performance. It is expected to see a negative relation between the board size and firm performance reported by earlier studies (Amason & Sapienza, 1997; Campbell & Mínguez-Vera, 2008; Conyon & He, 2017; Marinova et al., 2016; Valls Martínez & Cruz Rambaud, 2019).

Meso-Level Control Variables

The firm size may affect the firm's reaction to internal and external changes, which in turn, influences its efficiency. For example, larger companies may have a more complex bureaucracy that could cause inertia in information processing, decision making and strategy management (Li & Chen, 2018). In this study, a firm's size (FIRM_SIZE) is identified by market capitalization, calculated by multiplying the outstanding shares by the share price (*Encycl. Financ.*, 2006). For these purposes, annual averages of security data were used. The share price conversion into the US dollars was fulfilled with reference to official exchange rates retrieved from the World Bank Database (The World Bank, 2019b).

Along with firm size, the business case research controls for a firm age to account its life cycle (Conyon & He, 2017; Marinova et al., 2016). A firm age (FIRM_AGE) represents a number of years since a foundation of a company, the date of which was retrieved from Factiva and MarketLine databases.

Table 4. Sample size of gender diversity and GNL level interactions

Country	CRMx GNL_H	CRMx GNL_L	TILTEDx GNL_H	TILTEDx GNL_L	NWBODx GNL_H	NWBODx GNL_L
Australia	8	0	19	0	0	0
Canada	0	3	0	46	0	5
Denmark	1	0	20	0	2	0
Finland	11	0	17	0	0	0
France	58	0	23	0	0	0
Germany	1	2	16	24	0	0
Ireland	5	0	23	0	0	0
Italy	0	6	0	4	0	0
Japan	0	2	0	121	0	293
Norway	12	0	3	0	0	0
Sweden	28	0	36	0	0	0
Switzerland	2	1	15	27	3	7
The Netherlands	15	0	10	0	8	0
The United Kingdom	17	0	65	0	0	0
The United States	0	88	0	689	0	105
Total	158	102	247	911	13	410

Table 5. Sample size of interactions of gender diversity, faultlines strength and GNL levels

Country	CRMx GNL_Hx FAU_S	CRMx GNL_Lx FAU_S	TILTEDxGN L_Hx FAU_S	TILTEDxGN L_Lx FAU_S	NWBODxGNL _Hx FAU_S	NWBOx GNL_Lx FAU_S	CRMx GNL_Hx FAU_W	CRMx GNL_Lx FAU_W	TILTEDxGN L_Hx FAU_W	TILTEDxGN L_Lx FAU_W	NWBODxGNL _Hx FAU_W	NWBOx GNL_Lx FAU_W
Australia	6	0	9	0	0	0	2	0	10	0	0	0
Canada	0	2	0	19	0	1	0	1	0	27	0	4
Denmark	0	0	4	0	1	0	1	0	16	0	1	0
Finland	3	0	5	0	0	0	8	0	12	0	0	0
France	29	0	12	0	0	0	29	0	11	0	0	0
Germany	0	0	3	3	0	0	1	2	13	21	0	0
Ireland	1	0	9	0	0	0	4	0	14	0	0	0
Italy	0	1	0	0	0	0	0	5	0	4	0	0
Japan	0	0	0	39	0	167	0	2	0	82	0	126
Norway	5	0	2	0	0	0	7	0	1	0	0	0
Sweden	13	0	9	0	0	0	15	0	27	0	0	0
Switzerland	0	0	9	16	2	6	2	1	6	11	1	1
The Netherlands	4	0	3	0	0	0	11	0	7	0	8	0
The United Kingdom	1	0	13	0	0	0	16	0	52	0	0	0
The United States	0	50	0	380	0	67	0	38	0	309	0	38
Total	62	53	78	457	3	241	96	49	169	454	10	169

Macro-Level Control Variables

To control macro scale processes and regimes, the study applies several dummy variables: an industry sector, represented by a four-digit code of standard industrial classification (SIC) (Conyon & He, 2017; Terjesen et al., 2009; Wiley & Monllor-Tormos, 2018), country (COUNTRY), fiscal year-end (FISCAL_YEAR), and month (FIRSCAL_YEAR_MO).

Data Analysis

The data was analyzed in six steps. First, this thesis tested an explanatory capacity of control variables. To challenge the research proposition, the second and third steps evaluated the effects of gender diversity and faultlines strength on firm performance respectively. The succeeding three tests examined the hypotheses of research. It considers a relation between a company's success and 1) the GNL, 2) interaction of GNL and gender diversity dummies, and 3) interaction of GNL with gender diversity and faultlines dummies.

Considering that this study uses a designed status proxy that is a measurement of social beliefs about women and men's leadership abilities to which organizations isomorph (Lucas, 2006), the GNL is assumed to be exogenous to firm performance. Driven by this presumption, a JASP software capacities, and a practice of existing studies (Chadwick & Dawson, 2018; Conyon & He, 2017; Joecks et al., 2013), this research applied an ordinary least squares (OLS) regression in data analysis (Equation 5). The scalar data, except board age, tenure, number of women directors, and the GNL were brought to a format fitting a normal distribution. Initially having 1843 records, two outliers were deleted from panel data, resulting in the sample size of 1841. The multicollinearity assumption was tested based on

the variance inflation factor (Chadwick & Dawson, 2018; M. del C. Triana, Jayasinghe, et al., 2019) and the Pearson correlations (Cabeza-García et al., 2018) (Table 6).

The study recognized a possibility of omitted variables and also an issue of reverse causality, associated with a relation of gender diversity and firm performance (Carter et al., 2003; Terjesen & Sealy, 2016; Valls Martínez & Cruz Rambaud, 2019; Wiley & Monllor-Tormos, 2018). To overcome these problems, this study follows the existing practice and lags the dependent variable in all tested models (Valls Martínez & Cruz Rambaud, 2019). Still, if common practice assumes a one period delay in performance (Valls Martínez & Cruz Rambaud, 2019; Wiley & Monllor-Tormos, 2018), then this study introduces a two-year lag after a change in a board composition (ROAn+2) (M. del C. Triana, Jayasinghe, et al., 2019). Such a decision is also made to account for strategic planning and budgeting cycles, as well as capture results of decision-making made by the target boards. This work includes the inherited performance (ROA), which is reported to a shareholders meeting in the year of board election. Finally, the research also controls the extraneous effect from macro-, meso-, and micro-level factors on firm performance.

$$FP_{i,n+2} = \alpha_0 + \alpha_1 FP_{i,n} + \alpha_2 \sum GndrD_{i,n} + \alpha_3 \sum CV_{i,n} + Year_{i,n} + Month_{i,n} + \varepsilon_{i,n} \quad (5)$$

where $GndrD$ variable represents factors affecting diverse board dynamics (gender diversity, faultlines strength, status and the interaction dummies), n is a year of board election, i denotes an observed company, $CV_{i,n}$, $FP_{i,n}$, $Year_{i,n}$, and $Month_{i,n}$are the control variables, and the FP is firm performance.

Limitations

Set to ensure an accurate representation of female leadership culture by the GNL, the sample criteria diminish the resemblance of panel data with a population. The results of this study apply to elected from 2014-2016 boards of directors or supervisory boards of manufacturing companies with mid and large market capitalization, which are incorporated in democratic countries with open markets and above world average national income.

Furthermore, despite a wide range of introduced control variables, the aforementioned sample criteria that also eliminate some interference of extraneous variables, and lagged firm performance, the endogeneity problem may still persist because OLS is considered to be a biased method of data analysis (Marinova et al., 2016).

Results

Before running the OLS regression, variables were examined on correlation (Table 6). Additionally, they were tested on multicollinearity by means of variance inflation factors. The maximum VIF value registered equalled to 1.751 which is below the threshold of 10 (Chadwick & Dawson, 2018; M. del C. Triana, Richard, et al., 2019), indicating low probability.

The sample descriptive statistics and supplementary information also can be found in Table 7 and Tables 1-3 respectively. The analysis was based on companies incorporated in fifteen countries with a minimum of 5 companies in Italy and Norway and a maximum of 296 firms in the US (Table 1). The dataset consisted of 1841 observations and a total of 692 companies. On average, analyzed companies were characterized by a large market capitalization. Still, a firm size ranged from $2.4 billion up to $1122.8 billion US dollars. The sample included both newly incorporated and established in market companies, with a mean board size of 10.5 members. The largest boards were observed in European companies, which aligns with cross-national studies (Isidro & Sobral, 2015; Valls Martínez & Cruz Rambaud, 2019). Unlike previous studies that reported an average of 2.5 women directors (Isidro & Sobral, 2015; Valls Martínez & Cruz Rambaud, 2019), boards examined in this research had about 30% less women directors. Still, it also should be noted that the sample included companies with homogeneous boards.

Table 4 shows that teams with tilted women representation constituted a predominant fraction of the sample (n=1,158). They were followed by homogenous teams (n=423). The least frequently encountered collectives had a critical mass of female directors

(n=260). The mean age and tenure of directors were 61.3 and 7 years respectively. The GNL indices showed that the observed societies, despite progress in gender equality (World Economic Forum, 2015, 2016, 2018), still shared traditional views on leadership, on average scoring 0.39 in the GNL. Ireland, Finland and Denmark demonstrated the highest esteem of female leaders but were still halfway to absolute gender parity (Table 3). Based on the FAU data, the observed boards were characterized by both extremely weak (FAU = 0.01) and very strong faultlines (FAU = 0.982).

Generally, the model with control variables explained 41.9% of the variability ($p < .001$). The models examining the effect of gender diversity (α_2= 0.777, p = 0.437) and faultlines strength (α_2= =1.341, p = 0.180) on leadership teams demonstrated results consistent with a predicted by the critical mass and faultlines theories directionality of relations, yet, statistically insignificant.

Proceeding to the research question analysis, results indicated a positive and significant (α_2= 3.535, $p < .001$) relation of GNL with organizational performance, supporting hypothesis 1. Further, examining the interaction between gender diversity and the GNL, the results implied that tilted boards open for female leadership associate with better corporate governance ($p<0.05$). It was also hypothesized that a critical mass of low status of female directors would associate with firm underperformance. The data analysis results failed to support this proposition as it indicated an insignificant and positive relation between the aforementioned collectives and organizational outcomes (α_2= 0.558, p = 0.577). Therefore, hypothesis 2 was partially supported.

Table 6. Pearson correlations of variables

Variable		FIRM_AGE	FIRM_SIZE	GNL	WBOD	FAU	BOD_SIZE	DIR_AGE	DIR_TENURE	ROAn+2	ROAn
1. FIRM_AGE	Pearson's r	—									
	p-value	—									
2. FIRM_SIZE	Pearson's r	0.080***	—								
	p-value	< .001	—								
3. GNL	Pearson's r	-0.018	0.043	—							
	p-value	0.449	0.062	—							
4. WBOD	Pearson's r	0.087***	0.374***	0.358***	—						
	p-value	< .001	< .001	< .001	—						
5. FAU	Pearson's r	0.001	-0.034	-0.121***	-0.100***	—					
	p-value	0.962	0.146	< .001	< .001	—					
6. BOD_SIZE	Pearson's r	0.130***	0.340***	0.041	0.455***	-0.104***	—				
	p-value	< .001	< .001	0.079	< .001	< .001	—				
7. DIR_AGE	Pearson's r	0.110***	0.061**	-0.363***	-0.266***	0.193***	-0.021	—			
	p-value	< .001	0.009	< .001	< .001	< .001	0.372	—			
8. DIR_TENURE	Pearson's r	-0.016	-0.051*	-0.167***	8.774e -4	0.424***	-0.066**	0.413***	—		

Variable		FIRM_AGE	FIRM_SIZE	GNL	WBOD	FAU	BOD_SIZE	DIR_AGE	DIR_TENURE	ROAn+2	ROAn
	p-value	0.480	0.028	< .001	0.970	< .001	0.005	< .001	—		
9. ROAn+2	Pearson's r	0.036	0.124***	0.098***	0.039	0.041	-0.101***	0.028	0.165***	—	
	p-value	0.127	< .001	< .001	0.095	0.080	< .001	0.238	< .001	—	
10. ROAn	Pearson's r	0.012	0.178***	0.026	0.041	0.066**	-0.120***	0.072**	0.218***	0.636***	—
	p-value	0.621	< .001	0.260	0.076	0.004	< .001	0.002	< .001	< .001	—

*p < 0.05, **p < 0.01, ***p < 0.001

Table 7. Descriptive statistics

Variable	Valid	Mean	Std. Deviation	Minimum	Maximum
FIRM_AGE	1841	75.466	48.550	0	327
FIRM_SIZE	1841	23.76	52.550	2.4	1122.775
BOD_SIZE	1841	10.515	3.257	3	39
DIR_AGE	1841	61.337	3.940	36	73.710
DIR_TENURE	1841	6.991	3.591	0	21
GNL	1841	0.389	0.051	0.338	0.577
WBOD	1841	1.713	1.470	0	8
FAU	1841	0.438	0.180	0.01	0.982
ROAn+2	1841	0.052	0.117	-2.915	0.488
ROAn	1841	0.059	0.094	-1.114	1.911
COUNTRY	1841	10.064	3.566	1	15
FISCAL_YEAR	1841	2014.328	0.938	2013	2016
FISCAL_YEAR_MO	1841	9.227	3.849	1	12
SIC	1841	3186.539	566.901	2000	3990

Lastly, the examination of the GNL effect against gender diversity and faultlines strength partially supported hypothesis 3. The analysis established a positive relation between successful firms and tilted boards with strong faultlines and high GNL, as well as boards with critical mass of low-status women and weak faultlines, yet the link of former types of boards were statistically significant ($p<0.05$) and the latter type were insignificant (α_2=0.419, p=0.676). The regression of other instrumented sets of interaction dummies

found a significant and positive link between homogenous groups at high GNL (p-value less than 0.1% and 1%). However, these results were dismissed due to the small sample size.

Table 8. The OLS regression of control variables, gender diversity, faultlines strength, the GNL, and interaction dummies

Variable	Control Variables	WBOD	FAU	GNL	WBODx GNL	WBODx GNLx FAU
FISCAL_YEAR	3.626***	3.535***	3.628***	2.788**	3.38***	3.379***
	< .001	< .001	< .001	0.005	< .001	< .001
FISCAL_YEAR_MO	-0.192	-0.432	-0.351	-1.188	-1.21	-1.222
	0.848	0.666	0.726	0.235	0.227	0.222
COUNTRY	-3.976***	-3.946***	-3.958***	-3.034**	-2.924**	-2.78**
	< .001	< .001	< .001	0.002	0.003	0.005
SIC	-1.338	-1.209	-1.348	-1.263	-1.189	-1.197
	0.181	0.227	0.178	0.207	0.235	0.231
FIRM_AGE	1.715	1.649	1.736	1.695	1.794	1.746
	0.086	0.099	0.083	0.09	0.073	0.081
FIRM_SIZE	1.989*	1.721	2.046*	1.902	1.797	1.833
	0.047	0.086	0.041	0.057	0.073	0.067
BOD_SIZE	-2.369*	-2.484*	-2.479*	-2.37*	-2.397*	-2.36*
	0.018	0.013	0.013	0.018	0.017	0.018
DIR_AGE	-2.455*	-2.057*	-2.472*	-1.31	-1.309	-1.337
	0.014	0.040	0.014	0.190	0.191	0.181
DIR_TENURE	3.724***	3.575***	3.952***	3.805***	3.698***	3.591***
	< .001	< .001	< .001	< .001	< .001	< .001
ROAn	32.773***	32.722***	32.679***	32.512***	32.434***	32.313***
	< .001	< .001	< .001	< .001	< .001	< .001
WBOD		0.777				
		0.437				
FAU			-1.341			
			0.180			
GNL				3.535***		
				< .001		
CRMxGNL_H					1.165	
					0.244	
CRMxGNL_L					0.558	

Variable	Control Variables	WBOD	FAU	GNL	WBODx GNL	WBODx GNLx FAU
					0.577	
TILTEDxGNL_H					2.358*	
					0.018	
NWBODxGNL_H					2.289*	
					0.022	
NWBODxGNL_L					-0.769	
					0.442	
CRMxGNL_HxFAU_S						0.756
						0.45
CRMxGNL_LxFAU_S						-0.091
						0.927
TILTEDxGNL_HxFAU_S						2.121*
						0.034
TILTEDxGNL_LxFAU_S						-0.979
						0.328
NWBODxGNL_HxFAU_S						3.536***
						< .001
NWBODxGNL_LxFAU_S						-0.88
						0.379
CRMxGNL_HxFAU_W						0.570
						0.569
CRMxGNL_LxFAU_W						0.419
						0.676
TILTEDxGNL_HxFAU_W						1.135
						0.256
NWBODxGNL_HxFAU_W						0.597
						0.551
NWBODxGNL_LxFAU_W						-0.952
						0.341
R^2	0.422	0.422	0.422	0.426	0.426	0.429
Adjusted R^2	0.419	0.418	0.419	0.422	0.421	0.422
F	133.429***	121.328***	121.516***	123.198***	90.124***	65.046***
p	< .001	< .001	< .001	< .001	< .001	< .001

* p < .0.5, ** p < .01, *** p < .001

Discussion

The effect of control variables on firm performance aligns with previous studies. The only exception is size and age of a firm. Contrary to earlier studies (Adams & Ferreira, 2009; Campbell & Vera, 2010; Chadwick & Dawson, 2018; Isidro & Sobral, 2015), the results imply that increase of these characteristics directly correlate with company's outcomes. According to Coad et al. (2018), observed in this work connection of company's life cycle and performance can be explained by the fact that age represents a constellation of time-dependent variables, some of which may have a non-linear relation with performance. For instance, they report findings indicating that younger companies are more likely to implement riskier strategies, which condition their lower rate of survival (Coad, Holm, Krafft, & Quatraro, 2018). Also, older companies, despite rigidity and runtiness of operation, accumulate experience and capabilities and build reputation that provides them easier access to financial resources (Coad et al., 2018). All these factors give advantage to large companies over smaller ones (Coad et al., 2018). Furthermore, Coad et al. (2018) indicate that the age and size of companies increase the chance of survival. Also, it is argued that the resources of large companies allow the implementation of more advanced technologies and sustainable initiatives, which enhance performance (Andries & Stephan, 2019; Swamidass & Kotha, 1998). Considering that the sample size of this work included both mid and large market capitalization companies (M=23.76, SD=52.55) with a wide range of life cycles (M=75.47, SD=48.55), arguments provided by Coad et al. (2018), Andres & Stephan (2019) and

Swamidass & Kotha (1998) may indeed explain positive effect of firm age and size with its success.

Arguing about the limitations of the UET, CMT and SIT to capture gender agency in task group relations, this work examined gender diversity and faultlines relation with firm performance. The results conformed with expectations of the aforementioned theories, implying that companies may benefit from gender diversity that adds new perspectives during problem solving (D. C. Hambrick & Mason, 1984) and empowers women to lead decision-making (Kanter, 1977a), as well as suffer from homogeneity due to team fracturing that increases the chance of conflict (Lau & Murnighan, 1998; Tajfel, 1974; Van Knippenberg et al., 2004). Still, the influence of these two factors on corporate governance was insignificant. Thus, these results supplement findings of previous scholarly works, contributing to an ambiguity of business case studies (Hoobler et al., 2018; Kirsch, 2018; Mensi-Klarbach, 2014; Post & Byron, 2015; Terjesen et al., 2009). They also support this research argument regarding the CMT, UET and SIT limited ability to resolve missing variables problem of business case research.

Further analysis supplied additional evidence supporting this assertion and established an advanced explanatory capacity of the expectation states theory (Berger et al., 1980). The data analysis indicates that social acceptance of female leadership (a proxy of women's status) seems to enable gender-diverse teams to deliver better results. Grounding on the EST (Berger et al., 1980, 2014), boards of directors tend to hold high expectations not only for men but also women's performance in cultures with more gender-neutral leadership. The social norms predispose team members to perceive women as competent leaders,

resulting in the validity and propriety of their assignments (Lucas, 2006; Lucas & Lovaglia, 2006). Consequently, surroundings endorse women's engagement in decision-making (Berger et al., 1998, 1980; Lucas, 2006; Cecilia L. Ridgeway & Berger, 1986; Zelditch, 2001). Hence, it can be concluded that decreasing discrepancy in status removes behavioural barriers (Lucas, 2006; Cecilia L. Ridgeway, 2009) thereby enabling teams to capitalize on diverse cognitive maps of their members and deliver creative solutions in accordance with Hambrick & Mason (1984) claims. Considering that the upper echelons theory assume rational interactions between managers (Bunderson & Reagans, 2011; D. C. Hambrick & Mason, 1984) and Berger et al. (1980), instead acknowledges gendered nature of interactions, an advantage of the EST over the UET become obvious. Furthermore, the results showed that the mid and entry level women managers, and their teams, were beneficiaries of diminishing status inequality, supporting Lucas' (2006) argument about the ubiquitous effect of female leadership institutionalization on interactions within task groups.

Acknowledging interference of power dynamics with the productivity of gender-diverse teams (Bunderson, 2003; Bunderson & Reagans, 2011; Donald C. Hambrick, 2007; Lucas, 2006; Lucas & Baxter, 2012), this research examined the EST's ability to explain the relation by testing the EST concept of status against the idea of tokenism and critical mass proposed by Kanter (1977b). Resorting to Kanter's assertion that the most advantaged gender-diverse category of a leadership team is one with critical mass of women (Kanter, 1977b), this research hypothesized that disadvantaged groups (tilted and skewed) excel in cultures that score above average on the GNL, whereas boards with critical mass of women directors would underperform in societies with gendered female leadership norms. The data partially

supported the hypothesis by indicating that, when highly esteemed by society, women seem to more easily acquire legitimacy and more effectively manage the operation of an enterprise, even when they work in tilted boards. Yet, an insignificant, but positive, effect of critical mass of less equal status women directors on firm performance indicates that there is, in fact, some power in numbers. Alternatively, a higher number of women at the upper echelons may signify interference of organizational culture of female leadership (Mensi-Klarbach, 2014; Schilke, 2018), which may also impact the informal status and legitimacy of women authority. Certainly, some studies establish mediating effect of corporate values on diversity team (Dwyer et al., 2003; Isidro & Sobral, 2015), therefore, an openness to female leadership in some organizations may have contributed to positive relation observed in this study.

Finally, this study questioned identity-based conflicts (Lau & Murnighan, 1998; Roh & Kim, 2016; Tajfel, 1974; Van Knippenberg et al., 2004). Instead, it hypothesized that a status discrepancy conditioned by gender determines a degree of cohesion among team members (Greer & Jehn, 2007; Inesi & Neale, 2007; Sell et al., 2004) and influences the success of a company. To test the hypothesis, interactions of faultlines strength with gender-neutrality of leadership and numerical representation of women directors were studied. The author of this work specifically focused on sample subsets with opposing FAU and GNL effects on team cohesion, aiming to observe the performance of most advantaged according to the CMT and FT boards of directors under delegitimating female leadership conditions, and vice versa. As it was expected, the concept of status appears to more accurately predict firm performance than faultlines strength, since the results of analysis show that, under conditions of underrepresentation and strong group splits, high status women improve quality of

governance. According to the EST and neoinsitutional theory (Berger et al., 1980; Lucas, 2006), this mean that social belief in female leadership, conditioning women's high status, legitimate their authority (Lovaglia et al., 2006; Lucas, 2006; Lucas & Lovaglia, 2006). Consequently, surroundings perceive women's dominance behaviours as proper and valid (Zelditch, 2001); such attitude, in turn, decreases a chance of sanctions (Berger et al., 1980; Lucas, 2006; Cecilia L. Ridgeway & Berger, 1986). Also, because the level of gender status inequality (high GNL) associates with better performance, it can be implied that collectives with highly esteemed women are more likely to have cognitive conflicts, rather relational. Nevertheless, it is important to note, that the study established a statistically insignificant, yet positive relationship between firm performance and a critical mass of delegitimated female directors in boards with weak faultlines. This finding may be indicative of a residual effect of numerical transformation and social identity.

Conclusion

Initiated to end a debate over social justice and meritocracy of solutions for the underrepresentation of women in corporate leadership (Engelstad, 2012; Seierstad, 2016; Terjesen & Sealy, 2016), business case research fails to produce conclusive results (Hoobler et al., 2018; Roh & Kim, 2016). Analyzing scholarly literature, Hoobler et al. (2018) and Mensi-Klarbach (2014) identify major constraints of business case research: an essentialist approach and the lack of multilevel framework. Thus, this work contributes to the business case by 1) uncovering the potential of the expectations state framework (Berger et al., 1980) and Lucas' (2006) study bridging the EST with neoinstitutional theory. It also enables a non-essentialist method of research by a status proxy, the gender-neutral leadership index, and providing empirical evidence supporting the GNL's greater explanatory power compared to alternative concepts of gender diversity and faultlines strength.

Since the research determines strong relation of the GNL with firm performance, it suggests that policymakers and organizational management should prioritize solutions changing social beliefs about leadership and gender roles to diminish informal status inequalities in gender-diverse management teams. For these purposes, the GNL index can be applied as a baseline or point of reference when tracking progress.

With that said, future research can improve the GNL index accuracy as this measurement was first introduced in this work and has some opportunities for improvement. For instance, this study designed the index assuming equal strength of the relationship between the GNL and its constituencies. Thus, the tool would benefit from qualitative

research conducting an in-depth examination of social institutes and their weight in shaping the culture of gender-neutral leadership. Further, this thesis work suggests exploring reasons for a positive relation between firm performance and 1) boards with a critical mass of low status women, as well as 2) collectives with a critical mass of low status women and lower degree of identity polarization. The author of this research sees a possible explanation in organizational culture (Bezrukova, Thatcher, Jehn, & Spell, 2012; Mensi-Klarbach, 2014; Schilke, 2018), which was not accounted for in the GNL index. Thus, future research can learn about meso-level variables affecting the FL and incorporate them into the GNL index. It is also suggested to study the effect of aggregate status of individuals on firm performance.

Finally, future studies can address the limitations of this study. First, they can encompass the greater range of companies and countries. Second, the study may benefit from less biased methods of data analysis already applied in business case research, such as generalized method of moments (Valls Martínez & Cruz Rambaud, 2019; Wiley & Monllor-Tormos, 2018) or two-stage least squares regression analysis (Campbell & Mínguez-Vera, 2008; Carter et al., 2003) with random or fixed effect (Marinova et al., 2016; M. del C. Triana, Richard, et al., 2019).

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Appendices

Appendix I – Overview of data sources

Type of information	Source of Information	Link or Database	Date accessed
The gender-neutral leadership index	The Global Gender Gap Report by World Economic Forum	https://www.weforum.org/reports	Nov-19
Form of government	The Democracy index by The Economics Intelligence Unit	https://infographics.economist.com/2019/DemocracyIndex/	Nov-19
Economic freedom	The Index of Economic Freedom by The Heritage Foundation	https://www.heritage.org/index/download	Nov-19
GNI per capita, PPP (current international $)	The World Bank Database	https://data.worldbank.org/indicator/NY.GNP.MKTP.CD	Oct-19
Official exchange rate (LCU per US$, period average)	The World Bank Database	https://data.worldbank.org/indicator/PA.NUS.FCRF	Nov-19
Type of company (parent/subsidiary)	Factiva	https://global-factiva-com.proxy.lib.uwaterloo.ca/sb/default.aspx?lnep=hp	Jan-20

Type of information	Source of Information	Link or Database	Date accessed
	MarketLine	https://advantage-marketline-com.proxy.lib.uwaterloo.ca/HomePage	Jan-20
Year of a company's incorporation	Factiva	https://global-factiva-com.proxy.lib.uwaterloo.ca/sb/default.aspx?lnep=hp	Jan-20
	MarketLine	https://advantage-marketline-com.proxy.lib.uwaterloo.ca/HomePage	Jan-20
Securities	Compustat Database	Wharton Research Data Services	Dec-19
Fundamentals	Compustat Database	Wharton Research Data Services	Apr-20
Directors demographics	Institutional Shareholders Services	Wharton Research Data Services	Feb-20
	Bloomberg Database	Finance and Data Analytics Lab, University of Waterloo	Mar-20
	EDGAR database of the U.S. Securities and Exchange Commission	https://www.sec.gov/edgar/searchedgar/companysearch.html	Feb-20
	Companies' official websites		

Appendix II – Consolidated raw data

Please contact dmukhame@uwaterloo.ca for a copy of consolidated panel data.